

# EVALUATING STUDENTS IN ELEMENTARY SCHOOLS

Theory into Practice

DR. PRITAM SINGH



विद्यया ऽ मृतमश्नुते



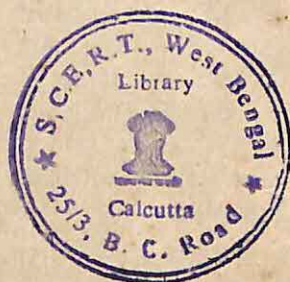
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NCERT

Department of Measurement and Evaluation  
National Council of Educational Research and Training  
Sri Aurobindo Marg, New Delhi-110016

# EVALUATING STUDENTS IN ELEMENTARY SCHOOLS

Part I : THEORETICAL FRAMEWORK

Part II : SCHEME FOR IMPLEMENTATION



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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्

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## FOREWORD

Public examinations have tended to exert an undesirable influence on the education system in our country. The teaching-learning processes adopted in educational institutions are quite often governed by the requirements of the external examination. In a way these examinations dictate curriculum and teaching and learning objectives. This is so mainly because evaluation has been regarded to be an end-of-the course activity and not as part and parcel of the teaching-learning process. Moreover, comparison of students' performance with their peers and counterparts in other institutions has led to the erroneous belief that evaluation is meant for making judgements for fitting students into well-defined slots.

Evaluation at all the stages of education, more particularly at the elementary stage should be used more as a developmental activity than for classifying or grading pupils. The theoretical framework developed in this document is based on the philosophy that evaluation is an integral part of the teaching learning process, the focus being on improvement of students' learning. The document, apart from giving a theoretical framework, also proposes procedures for implementation. The latter, worked out in detail, has been done for the use and guidance of state level agencies. The action plan makes the document more realistic and usable.

In the light of the priority accorded to universalization of elementary education, the document is very timely. I appreciate the efforts of Dr. Pritam Singh who developed the first draft, got it scrutinized by experts in the field and redrafted it in the light of the various suggestions. It is hoped that readers in general and elementary school teachers in particular, will find this document useful as a practical guide for evaluating their students' performance.

Comments and suggestions for further improvement of the document would be most welcome.

New Delhi:

October 21, 1982.

T.N. DHAR

Director, NCERT.



## P R E F A C E

'Most of the teachers do know that evaluation is used to pass judgements about students' achievement but only a few know that evaluation can be used for improving students' learning.'

Evaluation is an integral part of teaching and learning and it should be considered as a service component of the teaching-learning process. This concept of growth oriented evaluation is more relevant to the elementary stage than the higher secondary stage. This is because the children at this stage are more likely to be impacted by evaluations which are mostly irreversible. The present day judgemental evaluation used for grading and classifying students by comparing them with their counterparts does more harm than good to a small child who might develop negative self-concept after repeated failure or under-achievement, the label of which he gets after every evaluation. Evaluation of students in elementary schools should, therefore, be of formative or developmental nature instead of summative judgements that normally accrue from the traditional system of evaluation. Emphasis at this stage should not be on measurement of students' learning but on improvement of their achievement. For this it is essential that evaluation be treated as an inseparable part of the teaching learning process and the evaluation data be used more as a diagnostic device so that proper remedial instruction could be undertaken to improve students' learning.

This integral nature of evaluation process demands self-referenced and criterion related judgements rather than group based norm-referenced judgements. Thus comparison of students' performance with respect to the pre-determined criteria or expected level of performance is considered more important than determining the extent of deviation of a student from the class norm. It is this approach to evaluation which has been reflected in this document. Since any

good programme of evaluation depends on the quality of the instruments used, the role of various tools and techniques of evaluation has been discussed and their relevance to the various intended learning outcomes is made clear. Keeping in view the existing practices, the need for stating instructional objectives in operational terms cannot be overemphasized. This has been done after a lot of discussion with various groups of experts. For proper feedback, the other components like analysis, interpretation and use of results are also incorporated in this document.

Besides discussion of the theoretical framework, attempt has been made in this document to put theory into practice by indicating the various steps which may be taken by the state agencies for implementation of the improvement plan. How a policy statement on evaluation can be formulated and strategies worked out for implementation, diffusion and dissemination of reform have been spelt out. In addition, mode of summative evaluation of the programme or the whole project has been indicated alongwith the methodology of follow up and renewal of the scheme of reform. Towards the end some guidelines have been provided for development of a plan of action for reforming evaluation at the elementary stage. Thus, an attempt has been made in this document to provide a happy combination of theory and practice of reform.

I am thankful to my colleagues in the Department who directly or indirectly contributed through their timely suggestions. My special thanks are due to Prof. H.S. Srivastava for providing leadership role and expert guidance during the preparation of the first draft of this document. I am conscious of the various limitations of such a document and, therefore, leave it to the readers to give their considered views and observations for further improvement of this document.

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Our thanks are also due to Dr. N.P. Banerjee, Shri Abdul Haneef, Shri Bhagwat Prasad Dwivedi, Shri S.V.V. Raghavacharyulu, Shri J.P. Manglik, Dr. M.N. Siddiqui, Shri M.R. Bhatia, Dr. Bhaw-nesh Gupta, Shri B.S. Ghonkrokta, Shri P. Ramaiah, Mrs. Rajeshwari, Shri Ramji Dass, Shri Rasul Mohammad, Mrs. Sudesh Bhatnagar and Shri J.P. Shourie for their valuable contribution to the deliberations of the seminar as a sequel to which the first draft of the document was developed.

The second seminar which was held at the NIE Campus, Delhi was marked by the thoughtful discussions by some additional experts who participated in the follow-up seminar to discuss the draft document and for having given useful suggestions for improvement of the document. In this connection, I would like to express my thanks to Prof. R.N. Mehrotra, Shri Jacob Tharu, Shri B.L. Vyas, Shri Kedar Nath Prasad, Shri G.S. Mathur, Shri J.N. Sharma, Shri Ram Bahadur, Shri Y.R. Achuyta Rao and Shri G.S. Sriramurthi, who helped us in the improvement of the document.

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## INTRODUCTION

### 1.1 Quality Control in Education

Education is a subject which has generally received step-motherly treatment when compared to other areas dealing with national development, like those of agriculture, industry, commerce etc., in the allocation of funds. Budget seldom goes beyond 5 per cent of the total outlay. Whatever budget allocations are its further allocation is also not balanced. More budget is generally allocated for those areas which involve less number and less budget is allowed for these areas of development which involve more number. This is why the elementary education in general has always received comparatively less attention of the educational planners, for obvious reasons of greater involvement of efforts and money, compared to the secondary education and university education. Whatever the money is spent even on elementary education the major chunk of this goes to quantitative expansion which further leads to the augmentation of the problem of qualitative improvement at the elementary stage.

Keeping in view the quantitative expansion during the first five plans, efforts made towards qualitative improvement were not in commensurate with the magnitude of the problem. Unless qualitative improvement goes on side by side with the expansion programme, the increase in number of institutions without improving the quality of instruction will further result in wastage and stagnation. It is for the first time that the Government of India has kept elementary education as a priority area in the sixth five-year plan. Besides, universalisation, improvement of elementary education has become a moto for today's educational planners. All-out efforts are being made to achieve the target of universalisation in the next ten years.



## 1.2 Inbuilt evaluation

Under the proposed plan of universalization it is visualised that there will be a lot of flexibility in provision of educational facilities. Hetrogeniety of student population, differentiated teachability groups, multiple entry, ungraded schools etc., would be the common features of the proposed scheme. Problems like determining the entry behaviour of the students; classification of students for diversified groups or individualised instruction; identifying specific weaknesses of the students; allowing students to proceed from one learning unit to another depending upon their pace of learning judging in learning instructional deficiencies to avoid stagnation of students; checking wastage through failures etc., would be the relevant demands of the new system that would require more attention. For all this, there is need for some sort of quality control. It is here that the role of evaluation comes in. Unless there is a systematic and scientific evaluation none of the above mentioned features could be implemented properly. It is, therefore, the evaluation process which should be inbuilt in the process and programme of every educational endeavour.

Therefore, the present narrow concept of equating evaluation with examination must be replaced by broader concept encompassing the whole range of assessment of pupils' growth. To what extent the existing system of evaluation at the elementary stage utilizes this concept will be known by making a critical appraisal of the existing system of evaluation which in turn may form the basis for working out a plan of improvement.



## II

### SYSTEM IN VOGUE

#### 2.1 Examination—a judgemental device

It will not be a sweeping statement if we say that at present system of evaluation at the elementary stage is equated with written examinations which are used to assess only the academic achievement of the students. This does not, however, mean that oral testing and teachers' observations are not at all used as a means to make an assessment of students' growth. Even when techniques like written examinations, oral examinations and teachers' observations are used they are seldom thought of as devices for improving the process of teaching and learning. The word 'examination' looms large on the minds of little children as it does at the high and higher secondary stages. When on the basis of examination irreversible judgements are made to declare students pass or fail at a particular level, examinations do become night mare for children.

It is interesting to find that in some of the states even external examinations are held not only at the end of the elementary stage i.e., 7th or 8th but also at the end of the primary stage i.e. 4th or 5th. Whatever the purpose, rather the motive, may be in holding such examinations the fact remains that the students are under constant awe and fear of the examinations. Students are quite aware and remain conscious throughout the year that they are to be examined at the end of the course by some one and result of that examination matters a lot in being declared as pass or fail. This keeps the students on nerves, to get ready for the onslaughts of the forthcoming examination. Thus their attention is distracted from getting satisfaction in learning to that of passing the examination. Like-wise teachers get less intersted in making their students learn more and in a satisfying manner, but fell more interested in seeing their wards through and promoted. Therefore, it is not uncommon to find that teachers as well as students do not leave



any stone unturned to achieve this cherished goal, which has its impact on mode of learning and teaching.

## 2.2 Over emphasis on external examinations

Use of external examinations at the elementary stage cannot be advocated if we visualised the adverse side-effects of these examinations. In this period of rapid growth and physical development what purpose do external examinations what-purpose really serve is any body's guess. Those who advocate this institution they do it at the peril of stifling learners' potentialities and enthusiasm. One argument which is generally given in favour of such external examinations at the elementary stage is the maintenance of standards. Secondly, the basic assumption of such people is that teachers as well as students work hard when they know that their efforts would be judged by those who are not a party to teaching. The former view is offset by the fact the examinations of today simply measure and that too not reliably, one major aspect of students' growth. Moreover maintenance of standards is a function of curriculum content and efficient teaching. The veracity of the latter view can be verified only when magnitude of mal-practices and other collateral effects of such examinations are considered.

Under the circumstances, can it be the privilege of any body other than the elementary teachers themselves, to evaluate their wards. Do we want to examine only the students for whose under achievement or under growth either teachers or parents or even the community at large may be responsible? Every child learns up to its optimum level only when he is given the opportunity to learn at his own pace according to his own mode of learning, depending upon the quality of instruction. Causes of students weaknesses may, thus lie with teaching, administration, parents or the social milieu in which they live. Examination of students alone would, therefore, not serve the purpose. There is need for more comprehensive appraisal of teaching learning process in its social context. In the existing system all out efforts are directed towards the measurement of scholastic achievement of students. In other words it is the curricular subjects which are considered to be the main field of educational experience. Assessment of non-scholastic aspects like those of skills, attitudes, interests, habits, personal and social qualities etc., is relegated to



the background. The corresponding impact on teaching and learning is that these areas are not well taken care of, in the instructional system. The result is that emotional and social development of the child which perhaps at this stage is more important than the scholastic growth is sacrificed at the altar of sacred examinations.

With regard to the psychomotor development of child, certain activities like physical training, work experience and socially useful productive work, games and sports and other practical work do find place in the school curricula. Nevertheless, these activities do not generally count towards promotions in contrast to the written examinations which mainly form the basis for it. The assessment of these activities have hitherto been largely neglected. When an evaluation activity is linked with promotion or certification then that activity gets preferential treatment compared to the one that does not find such a recognition. If there is no such annual one-stroke examination conducted generally through written word, it is likely that all types of activities, whether intellectual, emotional, social or performance, will be regarded as significant because of their contribution to the all-round development. The present position is clearly indicative of the gross neglect of the development of the non-scholastic traits.

### **2.3 Need for use of non-testing techniques**

Use of tools and techniques is also limited to the written examinations. To be more specific, the question papers which are used in annual or quarterly examinations are the only tools of assessment of pupils' growth. Regular use of unit tests is a far cry. Even the question papers which are in vogue have very little relevance to the instructional objectives at this level. Quality of these tools is far from satisfactory. Oral testing if used in certain schools by some teachers, is a practice which is generally resorted to as a substitute for the written examination to save time and energy for constructing, administering and scoring of the written tests. Such tests are seldom used to test those objectives for which they are more suitable as for example with reference to the languages and environmental studies. As for performance tests, they are rarely used as testing device. Although a number of activities are undertaken by the schools as a part of teaching-learning process it



is seldom thought that such activities or other performance measures can also be used as basis for evaluating students' growth in the psychomotor dymain.

Teachers' observation which is one of the most credible and usable techniques can be profitably employed. For measurement of skills, assessment of attitudes, interests and other personal and social qualities like that of initiative, cooperation, sociability, civic sense, etc., this technique is quite, profitable. However this technique is not properly exploited by teaches. Even when some teachers take advantage of this technique it is used in a highly subjective manner and its reliability can be questioned. The need for making teachers' observation objective, systematic and scientific cannot be overemphasised. Other tools and techniques like the use of rating scales, check lists, interviews, sociometry, analysis of students' products etc., which can be effectively used for assessment of certain other aspects like health habits, study habits, social relationship among peers, skills, etc., are still to be discovered for use by the teachers.

#### **2.4 Analysis of results-a far cry**

Whatever tools and techniques are used at present for collecting evidences about student's growth in one or the other area it is assumed by teachers that the tools are quite valid and reliable and therefore, the evidence is also dependable. This is far from truth. No attempt is made at present to make a systematic analysis of the evidence gathered so as to know with more confidence, the assets and liabilities of students as well as the effectiveness of the instructional process. It hardly needs any mention that no attempt is made to analyse the results in terms of instructional objectives set-forth for a particular unit of teaching. At times when some exceptional teachers analyses the test results it is done in terms of the class. This leads to unhealthy comparison of a student with the class as a whole. A student is not judged in terms of his own progress, with reference to the instructional objectives or the accepted level of proficiency in a skill. Similarly the information covered and analysed is finally synthesised into the form of reports which are generally sent to the parent through the students. Such reports are global in nature and seldom indicate the level of inadequacy or adequacy of achievement. Reporting remains limited to judgement making process.



## 2.5 Diagnosis and remediation—need of the day

Diagnosing students who need additional help through remediation or enrichment programmes is not practiced at all. The major purpose of evaluation as it should be i.e. to identify student's strengths and weaknesses for regular feedback, is still to be appreciated by teachers of elementary schools. Promotion policies are based on the assumption that all students are able to progress at the same speed and can attain the same level of achievement in various aspects of pupils' growth. It is only once a year that promotions are made, irrespective of the level of accepted achievement which might have been reached by some students. More often than not, the expected level of achievement remains very much below the intended implicit level as reflected in the curriculum. Achievement of 30 to 40 per cent marks is considered as acceptable level for certifying the adequacy of the level. This is really a deplorable fact that promotions are based more on personal estimates of the level of pupils' achievement in different subjects rather than the optimal level (75 to 100 per cent) of mastery that could be considered as the optimum level of achievement.

## 2.6 Major shortcomings

From the foregoing appraisal of the existing practices it is not difficult to pin-point some of the major shortcomings which need be properly appreciated before taking up any plan of evaluation improvement at this stage. In a summarised way we can list these as under:

1. Concept of evaluation is restricted to examination rather than a broad comprehensive concept, concerned with variety of tools and techniques and all aspects of pupils' growth.
2. Evaluation is considered something as end-of-the-course/unit/session/activity rather than as an integral part of the teaching learning process.
3. Evaluation is considered as an act of measurement of students' learning rather than a means for improvement of their learning.
4. Evaluation activities are limited to the area of scholastic attainment rather than total growth of the child.



5. Evaluation is undertaken as an activity of teachers alone rather than cooperative enterprise of teachers, students, parents and community.
6. Use of tools and techniques is limited to written examinations largely.
7. Quality of written examinations is questionable from the point of view of validity and reliability.
8. Diagnostic evaluation is still a dream of the future.
9. Using evaluation as a feedback has yet to become a reality for improving students' learning.
10. Block promotion of students is still the usual practice and unitwise promotion is yet to be tried.
11. Reinforcement through regular feedback of information about students' success still needs attention of the teachers.

These are some of the many more glaring shortcomings of the existing system of evaluation at the elementary stage. What is really worth stating is the cause of all these ills. The cause may lie with the teachers or the educational system in general. It is obvious that evaluation seldom becomes subservient to what is learnt or what is taught. It is considered an activity alien to the teaching-learning process. Unless the teacher is cognizant of what a subject stands for in terms of expected learning outcomes for students he can neither relate teaching to dictuded learning outcomes nor can he make objective based evaluation. The first step, therefore, to improve the existing position is to make the elementary teacher aware of such intended learning outcomes. This requires the teachers to appreciate the role of overall objectives of the elementary education and develop the needed competence to understand the specific learning outcomes implied by each of these objectives. Only then they will be able to visualise instructional objective as a basis for both teaching and evaluation. Formulation of objectives at the elementary stage, therefore, becomes the immediate focus of our attention in this document.



### III

## INSTRUCTIONAL OBJECTIVES AT THE ELEMENTARY STAGE

### 3.1 Objective based evaluation

Objective being a normative concept reflects desirability of learning outcomes which the society cherishes. Objective, therefore, reflect not only the aspirations of the society but also provide basis for using suitable teaching and evaluation procedures. Formulation of objectives should, therefore, be done very carefully keeping in view the needs and educability of the learners, socio-economic needs of the community and the nature and structure of various disciplines. Objectives can be formulated at various levels, viz, at the national level, state level, stage-wise, sub-stage or class-wise, subject-wise, unit-wise and even lesson-wise. The present brochure related mainly to stage-wise objectives, specifically the elementary stage. Objectives of elementary education are to be formulated in line with state-wise viz-a-viz overall objectives at the national level. Since national objectives are stated in a global manner they have a limited scope as far as their translation into class-room situation is concerned. Unless they are delineated stage-wise followed by subject-wise objectives they cannot provide the needed basis for instruction and evaluation. Formulation of objectives at the elementary stage in terms of intended learning outcomes is, therefore, the first stop towards improving evaluation at this stage. Once this is done, concrete steps may be taken to gear instruction and evaluation to the tune of those objectives.

Elementary stage (I to VII/VIII) can be divided into primary and middle stages or as lower primary and upper primary for the purpose of formulation of objectives. There would, however, be a lot of overlapping in the area of many of the skills, habits, attitudes, interests etc. Besides overlapping, many of these objectives are long ranged objectives which demand continued attention and development starting from lower primary to the upper primary



classes. In accordance with the curriculum for the ten-year school a framework of the National Council of Educational Research and Training, the objectives at the primary stage should be formulated keeping in view the characteristics of the children at that stage e.g. activity, curiosity, spontaneity, creativity etc. The curriculum objectives should conform to the social, emotional, intellectual and physical maturity of child besides the socio-economic needs of the community. The preferred objectives for lower primary classes (I-V) would, therefore, be those of literacy, numeracy, technicacy, development of the inquisitive mind, healthy attitude and habit of self-learning.

### 3.2 Formulating objectives

The focus in the upper primary classes (VI-VIII) should be on the development of concepts in various subject fields, knowledge of the democratic processes and social institutions besides the ability to meet problems of adjustments due to greater emotional, social and physical development. Healthful living, basic language and symbolic skills, understandings and interest in social and physical environments, critical thinking, scientific attitudes, democratic living, appreciation, development of manipulative and constructional skills, positive attitude towards socially useful productive work and the place of spiritual and moral values are considered as relevant objectives that need greater emphasis at this stage.

A draft list of objectives worked out on these lines are given at the end of this chapter. Each of these objectives is further specified in terms of learning outcomes so that the teacher is able to understand the scope of each objective. Such a specification of the intended learning outcomes makes it easier for the teacher to focus instruction on those outcomes of learning besides using them as basis for evaluating students for the expected product of learning.

These objectives are stated at the level of elementary stage to provide the broader frame of reference. It is from these objectives that further derivation of instructional objectives for various subjects should be worked out for classroom teaching and testing. Thus formulation of instructional objectives for each subject area has to be done separately. This is necessary to highlight the need for development of such concepts, skills, abilities and attitudes that are specific to each subject. Unless subject-wise objective are worked out, it will not be possible to identify unit-wise objectives which



really become the basis for classroom teaching, learning and evaluation.

Whatever may be the subject area this broader list does provide a broad spectrum of objectives that forms the basis for curriculum, instruction and evaluation. At lower primary stage more emphasis should remain on such skills and abilities which later on becomes as intellectual tools of learning. Development of concepts should therefore, be preceded by the development of basic skills and abilities which are used as a means to develop those concepts. Process of learning rather than product of learning should be aimed at. Thus while identifying subject area-wise objectives more weightage should be given to the process objectives than the product objectives.

### 3.3 Rationale underlying

Formulating objectives in general and for elementary stage in particular is a very sacred job. This task involves a lot of subjectivity, because this is a matter of value judgement. It is with great care that only such values which are universally or at least nationally accepted should form the basis for deriving the objectives. To objectify judgements about the various types of values to be incorporated, experts' opinion may be sought in drafting the objectives. Experts do not only include the curriculum or the evaluation experts but also the elementary teachers and elementary teacher educators who indeed are the people who can validate the objectives more objectively. Thus involvement of practitioner of change cannot be overlooked in order to project the expected performance standards more realistically. Such standards of desired performance encompasses the knowledge the students should acquire, understandings they should have skills and abilities they should develop, habits and attitudes they should cultivate, interest they should manifest and the moral values they should imbibe. Objectives indeed are the guide posts which provide the needed direction to reach the destination. On the one hand they provide direction for framing of syllabus, methodology of teaching and learning and mode of evaluation while on the other hand they serve as basis for validating all the components of the curriculum. Cognizance of objectives is, therefore, essential to any project of curriculum construction, instruction and evaluation to keep the participants of the educational process conscious of goal directed activities.



### 3.4 Specification of objectives

The list of objectives that follow was earlier hypothesised on the basis of study of literature. This was then subjected to critical scrutiny at the All India Seminar held at Simla during June, 1977 and later on discussed at All India Meet held at N.I.E. Campus Delhi. Consensus was arrived at through discussion among knowledgeable persons from primary schools, secondary schools, universities, teacher training institutions, departments of education, state institutes of education and state evaluation units. They represented teachers, lecturers, administrators, curriculum experts, evaluations experts, heads of institutions, teacher educators and guidance officers, besides the staff of the Department of Measurement and Evaluation.

Draft objectives that follow cover cognitive, affective and psychomotor aspects of pupil's development. Each of these objectives is specified in terms of expected learning outcomes. Never-the-less the list is only suggestive. It can be further improved by some empirical evidence. Moreover, depending upon the resources, curriculum intentions, social and educational needs of the child and the State, some changes in the expected learning outcomes are possible and desirable too. However the list given here-in-after would be practicable and relevant to most of the institutions.

## OBJECTIVES AND THEIR SPECIFICATIONS

- 1.0 The pupil develops Basic skills of language communication such as listening, speaking, reading and writing and the symbolic skills like, the use of sign, symbols, drawing etc.**

### SPECIFICATIONS

#### A. *Language skills*

The pupil

- 1.1 acquires knowledge of the elements of language.
- 1.2 understands what he listens to.
- 1.3 understands what he reads.
- 1.4 expresses himself orally with proper pronunciation and intonation.
- 1.5 writes a legible and neat hand at reasonable speed.
- 1.6 expresses himself in writing, using proper language.



**B. Symbolic skills**

The pupil

- 1.1 recognises the significance of conventional units of measurement, signs, symbols etc. to express his ideas.
  - 1.2 translates unique signs and symbols into verbal form and vice-versa.
  - 1.3 interprets the given figures, map, graph, flow charts.
  - 1.4 selects the appropriate signs, symbols and units to express his ideas.
  - 1.5 expresses his ideas through the use of appropriate, diagrams, graphs, maps, etc.
- 2.0 The pupil acquires ability in fundamental numerical operation and make their use in drawing and reading tables, charts, graphs, etc.**

**SPECIFICATIONS**

The pupil

- 2.1 carries out oral calculation with ease and speed.
  - 2.2 carries out written calculation at reasonable speed.
  - 2.3 draws geometrical figures and graphs with ease and accuracy.
  - 2.4 reads tables, charts and graphs correctly.
  - 2.5 solves problems involving fundamental numerical operations.
  - 2.6 transforms verbal expression into symbolic ones and vice-versa.
- 3.0 The pupil develops understanding of terms, symbols, concepts, principles, laws, facts, events and trends etc. in relation to physical and social environments.**

**SPECIFICATIONS**

The pupil

- 3.1 differentiates between different terms, symbols, concepts, principles, laws, facts etc., of different subjects.
- 3.2 translates symbolic statements into verbal statements and vice-versa.
- 3.3 identifies symbols, objects, phenomena, relationships calculations etc.
- 3.4 cites examples of concepts, processes, events, principles and generalisations.



- 3.5 Calculates simple numerical problems related to different subject fields.
  - 3.6 discriminates and classifies facts, terms, symbols, concepts, events etc.
  - 3.7 interprets, events, phenomena, concepts, expression data etc.
- 4.0 The pupil applies the acquired knowledge and skills of a subject in different life situations.**

#### SPECIFICATIONS

The pupil

- 4.1 analyses events, situations and problems.
  - 4.2 formulates hypotheses on the basis of observations or data.
  - 4.3 establishes relationships between events, situations, phenomena etc.
  - 4.4 suggests alternative solution to problems related to different subject fields.
  - 4.5 draws conclusions or generalisations from the observed or given data.
  - 4.6 predicts results, trends, consequences etc. from the given data.
  - 4.7 judges the adequacy, correctness and consistency in the given data, results, causes etc.
- 5.0 The pupil develops observational, manipulative and constructional skills.**

#### SPECIFICATIONS

The pupil

- 5.1 notices the minor differences between closely related specimens, objects, people etc.
- 5.2 reports correctly what is observed by him.
- 5.3 reads, instruments, graphs, tables etc. accurately.
- 5.4 draws maps hearts and diagrams of the apparatus, models etc.
- 5.5 selects appropriate methods and materials properly.
- 5.6 handles apparatus, instruments and implements properly.
- 5.7 conducts practical work carefully and systematically.
- 5.8 improvises apparatus, models, toys etc.

**6.0 The pupil acquires knowledge of the basic principles of healthful living both individual and social and practises in daily living.**

**SPECIFICATIONS**

The pupil

- 6.1 knows importance of work, rest and leisure for good health.
- 6.2 takes balanced diet to keep his body fit.
- 6.3 gets up and goes to bed early.
- 6.4 keeps his persons clean.
- 6.5 keeps his neighbourhood clean.
- 6.6 participates in games, sports and other exercises regularly.
- 6.7 develops good food habits.
- 6.8 takes necessary precautions to prevent accidents, infections diseases etc.

**7.0 The pupil develops the ability to observe and appreciate beauty in things and phenomena.**

**SPECIFICATIONS**

The pupil

- 7.1 becomes receptive to objects of beauty.
- 7.2 perceives beauty in nature.
- 7.3 keeps his surroundings beautiful.
- 7.4 participate in creative activities like dance, drama, music, fine arts etc.
- 7.5 admires the beauty of nature, art, music, architecture, sculpture, literature etc.

**8.0 The pupil appreciates the cultural heritage of India**

**SPECIFICATIONS**

The pupil

- 8.1 reads with satisfaction about his country.
- 8.2 realises the significance of places and monuments of cultural importance.
- 8.3 likes to know about the great men of the past and their remarkable deeds and performances.
- 8.4 enjoys reading the ideals reflected in the mythologies, scriptures, literature etc.
- 8.5 identifies himself with the great ideals of the past.



**9.0 The pupil develops interest in his social and physical environments.****SPECIFICATIONS**

The pupil

- 9.1 observes keenly the social environments and natural phenomena.
- 9.2 enjoys reading books about facts and phenomena.
- 9.3 enthusiastically participates in excursions, visits and field trips.
- 9.4 collects information, data, specimens, models etc. on his own.
- 9.5 enjoys collecting and displaying specimens, objects, things etc.
- 9.6 engages himself in hobbies like improvising models.
- 9.7 participates willingly in the festivals and fairs of the community.

**10.0 The pupil develops qualities of democratic living with reference to self, school, home and society.****SPECIFICATIONS**

The pupil

- 10.1 observes discipline in class and outside.
- 10.2 cooperates with others in accomplishing a common task.
- 10.3 shows tolerance towards others.
- 10.4 controls emotions and displays restraint.
- 10.5 develops civic sense.
- 10.6 respects group decisions.
- 10.7 believes in basic human qualities of man.

**11.0 The pupil develops sense of emotional and national integration, patriotism and universal brotherhood.****SPECIFICATIONS**

The pupil

- 11.1 feels proud of being an Indian.
- 11.2 reads about his country and country men.
- 11.3 respects the great sons and heroes of India.
- 11.4 has sympathetic understanding of different peoples belonging to different social, religious, linguistic and cultural groups.

- 11.5 understands the significance of the National Flag, National Anthem, and Indian Constitution.
  - 11.6 actively participates in the observance of national days.
  - 11.7 appreciates the essential unity in the apparent diversity of people in India.
  - 11.8 reads about U.N.O. and other international agencies.
  - 11.9 makes pen friends from other countries of the world.
- 12.0 The pupil develops scientific attitudes, critical thinking and desire for knowledge.**

### SPECIFICATIONS

The pupil

- 12.1 has a keen desire to know how and why of anything that happens.
  - 12.2 has a habit of careful observation and independent thinking.
  - 12.3 does not believe in superstitions.
  - 12.3 becomes open minded to accept views of others.
  - 12.5 does not accept or reject any thing without valid reasons.
  - 12.6 suspends judgement in the absence of sufficient evidence.
  - 12.7 reports the results of observations, and investigations systematically and faithfully.
  - 12.8 distinguishes between facts and propaganda, relevant and irrelevant etc.
  - 12.9 identifies central issues and themes in a given text.
  - 12.10 evaluates evidences in terms of given or implied criteria.
- 13.0 The pupil develops positive attitudes, necessary skills and work habits to undertake socially useful productive work.**

### SPECIFICATIONS

The pupil

- 13.1 participates in activities involving manual productive work.
- 13.2 cultivates the dignity of labour and productive skills.
- 13.3 respects persons engaged in productive work.
- 13.4 voluntarily participates in social service activities like community health and sanitation.
- 13.5 cooperates in the developmental tasks and other projects of the community.



**14.0 The pupil appreciates universally accepted social, spiritual and moral values.**

**SPECIFICATIONS**

The pupil

- 14.1 respects feelings of others.
- 14.2 values dignity of manual work and hard labour.
- 14.3 develops the qualities of truthfulness, honesty, sense of responsibility and integrity of character.
- 14.4 loves his neighbours and peers.
- 14.5 works for the welfare of all.

## INTEGRATIVE APPROACH TO EVALUATION

In educational parlance evaluation is generally considered as an activity concerned with making judgements about pupils' learning. The main purpose for which evaluation is used is to see the extent to which the instructional objectives as stated in the curriculum have been achieved. Emphasis remains on collecting evidences about pupils' achievement and making judgements in terms of instructional objectives. It is seldom appreciated that pupils' growth is the result of quality of instruction provided to him, the facilities or conditions under which he had to learn, besides the efficiency of testing itself, on the basis of which the judgements are formed. The scope of evaluation is, therefore, restricted to the measurement of his learning which may or may not have taken place due to certain inadequacies in organisation of teaching-learning activities, provision of facilities or the persons who are directly or indirectly concerned with his growth.

### 4.1 Measurement and pedagogical aspect of evaluation

Evaluation has a scientific basis. The quality of instruments of evaluation controls the accuracy of the evidence that accrues from such instruments. A good instrument of evaluation must be appropriate to the objective being tested so that it serves the purpose which is intended by its users. Similarly, the instrument must be relevant to the content through which those objectives are tested. This quality refers to the validity of the evaluation instrument. The second aspect is the dependability of the evidence from the point of view of accuracy of measurement. The more objective is the measurement, the more reliable it would be. How consistently an instrument of evaluation measures accurately, determines the reliability of that instrument. Ease of administration, scoring and interpretation of the evidence are other considera-



tions which improve the usability of the instrument. Thus validity, reliability, and usability are the three major qualities of a good measuring device. It is these qualities which improve the measurement value of evaluation, and provides scientific basis.

The other aspect of evaluation is its pedagogical value which emphasises the role of evaluation in generating such actions which help to improve teaching and learning. By pedagogical value we mean that the evaluation process should be so geared that it helps in improving study habits of learners and provide needed motivation to accelerate their learning. Likewise it should also act as a motivating device for teachers by providing the necessary feedback on their instructional efforts.

The ultimate aim of evaluation is the self-evaluation by the learner. A time should come when continued use of such evaluation practices which are integral to the teaching-learning process, make the individual feel the need for continuous evaluation of his own learning at his own time and in his own way. After all, evaluation keeps the learner informed about his adequacies and inadequacies in learning. Knowledge of the former provides reinforcement and confidence leading to motivation for further learning while knowledge of the latter helps him to identify gaps in his learning and the need for relearning. Continuous assessment of needs of an individual as revealed by the evaluation data does motivate for further learning or relearning.

#### 4.2 Evaluation—A Total School Concept

The activities, materials, teaching, learning, testing, administration and supervision are all relevant factors that impact pupils' learning in one way or the other. To what extent the growth is the result of one or the other factor is difficult to say. Likewise growth also depends on the suitability of the teaching learning material and the quantity of material supposed to be learnt in different-subject areas. A modern and heavy curriculum will have a different impact on teaching and learning as compared to a traditional and light curriculum. Unless the evaluator is cognizant of the curriculum load which may among other things, comprise the various subject fields, co-curricular activities and extra-curricular activities, he will not be able to appreciate the extent of impact on students' learning. Similarly different personnel in the school have their own impact. Learner's peers, the teachers, the supervisor,



the headmaster and other personnel have their roles to play in the light of needs of the learner. Poor supervision, or lack of co-ordination of various activities may result in bad teaching which will be indirectly reflected in bad learning. Physical facilities like buildings and grounds, equipment and apparatus, laboratory or library services will like-wise have positive or negative impact on student's growth.

Thus, evaluation of pupils' growth cannot be limited to the apparent learning about which evidences are collected through usual tools and techniques of examination. When is the evidence collected? What is the mode of its collection? How often it is collected? What is the quality of instruments used for data collection? What methodology of judgement making was adopted? All these factors influence students' learning. In general when we evaluate our students we often assume good teaching, adequate facilities, suitable curriculum, etc., although all these assumptions are questionable.

Therefore, pupils' evaluation is closely related to all types of activities which are going on in the school. If evaluation is to be done systematically we must be cognizant not only of the intents and purposes of the school but also the various types of operations and activities which are going on in the school and the persons who are behind organisation of all those activities. Evaluation is, therefore, not an isolated activity. This is a process which must be visualised in the context of total teaching learning situation in a school, as it provides information about antecedents, transactions and outcomes of students' and the teaching learning process. As such it is a broad concept and can be regarded as a total school concept.

From the various types of activities referred to above if we limit our process of evaluation to that of appraisal of pupils' growth irrespective of the factors, the resources facilities, the personnel and instructional materials that condition pupil's attainment, then we call it *pupil evaluation*. But when we try to judge the efficacy of the instructional objectives, the learning content, the methodology of instruction and quality of evaluation instruments, we are undertaking *curriculum evaluation* in which case pupil evaluation become a sub-set of curriculum evaluation. If we go a step further and try to judge not only the end-products of evaluation (Pupils' growth and materials) but the efficiency of the process

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as well, besides determining the optimum utilisation of the resources, both financial and man-power, then we are trying to take up *programme evaluation* of which curriculum evaluation becomes a sub-set. Thus pupil evaluation is a part of curriculum evaluation while the latter is a part of the programme evaluation. This relationship must be visualised in order to appreciate the limitations of pupil evaluation. Evaluation, therefore, can be regarded as a total school concept.

#### 4.3 Evaluation for improvement of students' learning.

For effective evaluation in the class-room the teachers have not only to appreciate this broader view of evaluation but also consider that all efforts in this direction are directed towards the improvement of students' learning as well as the instructional process. The other thing that a teacher need to appreciate is the inter-relationship of the instructional objective, the teaching-learning activities and the process of evaluation. This integrated concept of evaluation visualises evaluation as a teaching activity rather than a judgemental activity. Still another point to remember is that if learners achievement is below the accepted level of attainment the fault may not lie with the child but elsewhere. Lack of pre-requisite learning, lack of motivation, lack of time allowed for learning, unsuitability of instruction or inadequacy of evaluation may be the real cause for this. Therefore, while evaluating students, the needs of the learner, the purpose of evaluation, the goal of evaluation must be clearly understood. The need for dove-tailing teaching and testing cannot be overemphasised in this context.

Evaluation at the elementary stage has to be viewed quite differently from that of higher secondary or university stage of education. Vastness of numbers, difficulty of communication, diversity of languages, lack of qualified teachers and weak supervisory services are problems more acute to elementary education. Therefore, any programme of evaluation has to be thought of in this context.

Concepts like external evaluation, failures or detentions, comparison of students' performance with a norm group or a class, use of test results for grading or certifying achievement etc., should no longer find place in the scheme of evaluation at the elementary stage. Instead, evaluation for placement, diagnosing students



difficulties, identifying instructional deficiencies, providing continual experiences of success to students, developing in them positive self-concept, encouraging self-paced learning, invoking self-evaluation, emphasising criterion-based testing, using test results for reinforcement and feed-back etc., will be the most sought for characteristics.

#### **4.4 Evaluation as integral component of instruction**

Whereas the emphasis on the secondary stage is more on development of the intellectual skills, the emphasis at the elementary stage should be more on development of affective behaviours and psychomotor skills through productive work. Testing for concept-based product objectives will give way to activity-based process objectives. Likewise individual-based self-referenced evaluation would be preferred to class based norm-referenced measures. Self-evaluation, peer evaluation and evaluation by community will be the added dimensions to the existing teacher-based evaluation at the elementary stage. Evaluation as end-of-the-term or course activity would be replaced or substituted by continuous evaluation as one of the teaching-learning activities. Analysis of results would henceforth be utilised for improvement of students' learning rather than for grading or classifying students. Evaluation for diagnosis and remediation will be considered the sacred function in contrast to use of evaluation for passing judgements as it is done at present.

Thus we visualise a clear departure from the traditional concept of evaluation of measuring students' achievement to that of improving students' achievement as well as the teaching-learning process itself. The system in vogue is far from being satisfactory. The most cogent reason is the lopsided development of the curricula prescribed. They neither provide the nature of intended instructional outcomes nor the methodology of attainment of the expected or desired objectives. Moreover the content of curriculum is seldom delineated in terms of concepts to be developed which makes it difficult for teacher to dovetail evaluation with teaching and instructional objectives. This lopsided view of teaching-learning process has resulted in overlooking of certain aspects of pupil's development. Objectives of teaching and learning are limited largely to cognitive development of the child whereas affective and psychomotor objectives are relegated to the background. In this



document an attempt is made to project the concept of evaluation as a total *school concept* rather than an adjunct to the teaching learning process. Comprehensive assessment of students' total growth in its various dimensions is visualised with a view to finding out causes of short-comings and weaknesses in learning and teaching which forms the basis for improving the teaching-learning process.

#### 4.5 Evaluation for mastery learning

At the elementary stage the focus of evaluation should be more on using evaluation for improvement of pupils' learning. As such judgemental function of evaluation must give way to developmental function through formative evaluation. To what extent the pupils have mastered the needed concepts and what are the concepts which are still to be mastered should be the concern of the evaluator. Since evaluation at the elementary stage is to be considered as integral part of the teaching learning process, efforts are to be made to find out as to what are the inadequacies in pupils' learning so that appropriate remedial measures may be adopted to bring them up to the desired level of performance. Therefore, it is not 33 or 30 per cent mastery of the concepts that is required but it is at least 75 per cent mastery of the concepts which is desired. As such the evaluation effort must be geared to grade the students as masters and non-masters. Unlike traditional evaluation especially at higher secondary level where focus is on comparison of students and their performance in terms of minimum requirements (33, 35 or 40 per cent) the evaluation for mastery is focussed on determining the maximum level of expected performance reached by a student which usually is more than 75 per cent. This sort of emphasis is ultimately directed towards the pre-determined criteria (criterion-referenced), regarded as intended level of achievement. Such an approach leads to reduction of wastage and stagnation of poor students who are always pushed forward through remedial programme based on diagnosis of their inadequacies in learning.

#### 4.6 Evaluation as Feedback

When evaluation is considered as a means for improvement of learning, improvement of teaching and even improvement of process of teaching and learning, it has an inbuilt feedback mecha-

nism. Feedback can be of two types; the intrinsic and extrinsic. The intrinsic feedback is possible only when the students appreciate and enjoy meaningfulness and usefulness of the evaluative process. This is possible through self-evaluation by the students or sometimes through programmed tests. True indication in this sort of feedback comes from students when they themselves feel interested and ask for evaluation of their learning. The extrinsic feedback is to be ensured by the teachers. If the results of students' achievement are conveyed to them in regular succession and immediately after testing, they get acquainted with what they have mastered and the things they have yet to master.

Knowledge of both inadequacy and adequacy of their achievement help the student to motivate for further learning if communicated properly. Acquainting the student with more successful attempts not only help reinforcement of their learning but also develop in them positive self-concept which is something very unique achievement. Integral concept of evaluation envisages regular feedback to students. In fact concept of evaluation as feedback generates dynamic interactions among the objectives, the learning experiences and the evaluation tools and techniques. It is this ecological basis of evaluation which must be appreciated and deliberately emphasised.



## REQUISITES OF A GOOD EVALUATION PROGRAMME

What is a good evaluation programme, is in fact, a matter of subjective opinion. However, an evaluation programme can be considered good if it serves the intended purposes of the school. The assets, the liabilities, the constraints, the financial resources, the technical competence, the types of student population and the physical facilities are some of the significant parameters that condition the programme of evaluation in a school. Nevertheless, there are certain criteria which can apply to any evaluation programme. From this view point a programme of evaluation can be regarded as effective from two angles. Firstly; it should be properly manageable keeping in view the facilities, resources, the constraints and the competence of the personnel to be involved. Secondly; a good programme of evaluation should be pedagogically sound. Each of these aspects can be dealt separately under the two heads.

### 5.1 Management Aspect

(a) First requisite of a good programme of evaluation is that it should be *economical*. Unless an improvement programme of evaluation can be sustained by the financial resources of the school, vis-a-vis, the state exchequer it can not hold. Even if sufficient resources of a particular state are available, a good programme of evaluation, ensures their optimum utilization. Keeping in view the meagre resources and allocation to education, evaluation programme should be so planned as to involve the minimum financial inputs. What is needed is that at least the expected dividends from the proposed programme should be in commensurate with the financial inputs. Accountability in recent years has become one of the significant criteria of success.

(b) Second requisite of a good evaluation programme is that

should be *functional*. This means that the programme should not be too pedantic to be understood by the elementary teachers on the one hand or too ambitious to be practicable in a given context. The technicracy of the programme must be in accordance with competence of the task forces to be involved and especially the grass root workers i. e. the teacher. If needed, the programme may be phased to make it more functional. The field realities should not be overlooked in developing a programme. Thus realistic understanding of the resources, possible inputs and administrative difficulties is essential for making a programme realistic. However, academically sound the programme may be, it is no longer functional if it does not work in the field.

(c) The third requisite is that a good evaluation programme should be *efficient*. This means that the programme should be well-conceived. It must have the potential of qualitative improvement. An evaluation programme can be considered efficient only if it ultimately leads to the attainment of predetermined objectives of school evaluation for which the programme is being launched. Its efficiency may be judged in terms of the end-products as well as the processes involved, leading to those end-products. The first aspect refers to the production of evaluation materials like that of units tests, diagnostic tests, remedial exercises etc. as well as to students' growth. The second aspect relates to the various strategies and the activities used for ensuring the intended products. Orientation of personnel, uses of evaluation material, feedback of results, involvement of different agencies, use of objective-based instruction and evaluation etc. are the processes used. Thus a programme even if it is economical and realistic may not be efficient if it does not yield the intended results in terms of student's learning or growth.

(d) The fourth requisite is that a good evaluation programme should be *adaptable*. Flexibility is an essential feature of any good programme of evaluation which cannot be overlooked. Necessary precautions and measures may be taken while developing an evaluation programme. Certain unforeseen circumstances cannot be visualised at the time of planning, provision for which cannot be made before hand. Certain changes have to be made in the original plan even while implementing the programme. Deviations if any, must find a place in the proposed programme.



If the framework of the programme is rigid and does not admit modifications or charges, it becomes either impracticable or non-functional. This does not, however, mean that the original frame of reference may be distorted. What is expected is that within the broader conceptual framework of evaluation, the programme may be modified in the light of changed conditions, resources or personnel. Therefore, the scope for extension or contraction of the programme must be there without jeopardizing the intents and purposes of the programme. A good programme of evaluation must be flexible to meet the changed needs of the school.

(e) The fifth and the last requisite of management of a programme of evaluation is that a good evaluation programme should be *illuminative* in nature. This means that programme must indicate the highlights of the programme very clearly. For example the points like, evaluation—a total school concept; evaluation as integral part of teaching-learning process; evaluation a means for improvement of students' learning rather than passing judgements on their learning, are the highlights of the evaluation approach suggested here. It is these points that become the foci for educating the personnel involved in the programme. To what extent the programme reflects the needs, aspirations and involvement of pupils? Who would be the practitioners of the intended improvement of reform? Unless those who are supposed to practise the new evaluation approach, are involved in its planning, development and evaluation, the programme may not be acceptable for implementation. It creates a number of difficulties and resistance on the part of teachers. Consensus based on the opinion of the students, teachers, supervisors, counsellors and the heads of the institutions must be arrived at, before launching the programme. Illuminative aspect also attempts to cover the service aspect which is concerned with the gathering, collecting and reporting of information in respect of the enroute products of evaluation. Therefore, the illuminative approach to evaluation refers to the importance of opinions of all those people who are involved as planners, developers or practitioners in determining the effectiveness of the programme in terms of product as well as the process of performance.



## 5.2 Pedagogical Aspect

Pedagogical aspect of programming for evaluation emphasizes the role of evaluation in promoting the cause of learning and teaching. If the system motivates and helps the teachers and students to improve academic standards by improving learning and instruction it is the pedagogical impact of evaluation. This is besides the validity, reliability and practicability aspects of the evaluation instruments as discussed in earlier pages. Further details of the pedagogical aspect of evaluation may be described as under :

### (a) Testing for Mastery Learning

It hardly needs any mention that evaluation must be objective-based. This means, that instructional objectives are set in advance and evaluation has to be based on those very objectives. The present position is far from satisfactory. Mostly, evaluation is undertaken for testing of rote memory of students. This not only prevents development of higher abilities among the students but also cultivates wrong impression among the children that learning is equated with rote-memorisation of facts, events or formulae. Even when some teachers are conscious of objective-based evaluation it is only one single objective of factual information that is taken care of in the scheme of evaluation. Even when mastery of a single objective is considered it is seldom attempted. The main reason is that the minimum acceptable mastery level in respect of learning of concepts or a particular content, is only 30 per cent to 40 per cent. It is due to this minimal level of mastery of concepts or skills that is expected for promotion of students or for going from one unit to the other in classroom instruction. Ultimately this leads to stagnation and wastage as the students after reaching a particular level are not able to benefit from instruction because of lack of pre-requisite skills or concepts essential for the new unit.

The mastery learning concept, therefore emphasises the attainment of a minimum mastery level of 75 per cent to ensure future learning. Each objective is thought of in terms of certain criteria which represent the various learning outcomes expected as a result of instruction. It is like a continuum of achievement representing different levels of proficiency that a student is expected to achieve.



The new approach emphasizes the evaluation of students in terms of all such criterion behaviours (expected learning outcomes). Existing practice of declaring 33 per cent attainment as acceptable level in a particular subject or a learning unit is not warranted.

Another important point with regard to cognizance of objectives is the need for greater emphasis at the elementary stage on testing of affective and psychomotor objectives. This of course, presupposes that proper learning experiences are provided to students for the development of these abilities. Since affective behaviour is important both from the point of view of product of learning as well as its role as a motivating factor for new or developmental learning. Its importance must not be relegated to the background as we see today. Likewise, psychomotor activities not only help the students to acquire certain skills and concepts which act as tools for further learning but also help in developing wholesome interests which in turn become a motivational device for further learning. Thus planned and deliberate efforts must be made to base evaluation programme on all the instructional objectives which are considered desirable and are formulated in advance for a particular subject at the elementary stage.

#### **(b) Individual Based Evaluation**

The second aspect is the individual based evaluation. This means that individual should be considered as a unique person and he should not be evaluated with reference to other individuals in the form of a class or group of students. With his own assets and liabilities in terms of environmental and educational background, the pupil learns at his own speed in his own way. Evaluation of his performance in terms of class is not as important as comparing his performance with his own performance at two different times so that his rate of progress is known. The interpretation has to be self-referenced. This can be ensured by development of sequential tests on the various graded units of learning and students may be asked to get themselves tested at staggered timings depending upon their rate of progress. Individualised evaluation, therefore, is of great significance and can be practiced only when unit teaching approach is adopted in the instructional programme. Judgemental evaluation, if any, may be done in terms of the individual learning. Infact, the ultimate aim of evaluation at this level is to introduce self-evaluation technique.



**(c) Diagnostic Evaluation**

The third aspect is that evaluation should be predominantly diagnostic in nature. At the elementary stage evaluation can no longer be considered as a judgemental affair for grading or certifying students' achievement. It must be aimed at proper placement of students to enable them to benefit maximum from instruction. Therefore, the use of readiness test prior to developmental teaching may be considered a necessity. Evaluation should also aim at diagnosing pupils' difficulties during the course of instruction. Since identification of difficulties in learning is the sacred function of evaluation it calls for more frequent evaluation and providing the needed remedial instruction. Continuous reporting of strengths and weaknesses for reinforcement and correctives is possible only when evaluation is considered a diagnostic device. Diagnostic evaluation should also aim at highlighting the shortcomings in evaluation and be aimed at improvement of evaluation process as well.

**(d) Integrative aspect**

Fourth aspect is that evaluation should be integrative with teaching and learning. As pointed out earlier evaluation must go side by side with teaching. Unit teaching and testing should be based on the same Unit objectives to make them integral part of the unit plan. It also assumes the integration of content which indeed is a function of curriculum development. Still the content of testing could be derived from various areas. Use of objective based questions in teaching is another way of integrating the two. Likewise framing of questions in terms of objectives and in accordance with learning experiences provided should be a deliberate effort. The basic assumption in making evaluation integrative with teaching and learning is that evaluation is dependent on teaching and learning episodes and cannot maintain its separate identity in the teaching learning process.

**(e) Compositness**

Fifth aspect is, that evaluation should be comprehensive enough to make a through assessment of the pupil's growth. At present the assessment of pupils growth is by and large limited to the cognitive abilities of the students. In the new approach to evaluation, scope of evaluation is to cover other areas of pupils'



growth also. Therefore, assesement of habits, attitudes, interests physical health, personal and social qualities cannot be ignored in the assessment programme. For comprehensive assessment of all aspects of growth there would be a need for variety of tools and techniques which will have to be employed to gather evidences about pupils' growth.

Thus the new approach to evaluation envisages the use of techniques, other than written tests also. Observations, check lists, rating scales and many other techniques which are detailed in the next chapter, will be in use. However, many of the aspects of development cannot be evaluated by teachers alone. Certain qualities like sociability, physical health, emotional stability, civic sense etc., cannot be properly evaluated without involving learners, parents, peers and even sometimes community members besides the class teachers and other teachers in the school. Therefore, in order to xray each and every aspect of pupils' development and that too at frequent intervals, would not be possible unless evaluation become a cooperative enterprise. Evaluation cannot be considered a monopoly of the teachers alone but an activity in which all those who watch the child to grow in or out of the school must have to give opinion on the development of all those qualities, whether intellectual, emotional social or physical. Thus comprehensive evaluation includes a continuous and cooperative effort of people at different times to collect the needed evidences.

#### **(f). Feedback Aspect**

Sixthly, a good evaluation programme must have a feedback mechanism. This means that every assessment whether done through testing, observation, inquiry or analysis must be followed by reporting of evidences for the benefit of the students, the teacher himself and the parents. At the elementary stage, reporting back to learner is very important to give him the knowledge of adequacy of his achievement or the need for further mastery of a particular area. Proper reinforcement through regular feedback of results is very useful for further improvement of students' learning. Feedback to teacher is essential to improve his strategy of teaching. Feedback of results is important to the curriculum expert to adopt or adapt the curriculum. Finally, feedback is important for the administrator to take proper decisions in respect of the teaching-learning process. It is this component which generates a lot of

interaction among the various components of the teaching-learning process besides the persons who control or are involved in the process of teaching and learning. This really is the ecological basis of evaluation which has hitherto been almost totally neglected.

From the above description it is evident that a good evaluation programme is one which on the one hand is manageable and on the other is academically viable. The management aspect is a precursor to the pedagogical aspect. Whereas mastery oriented, individualised, integrative, diagnostic, continuous and comprehensive aspects form the core criteria of a good evaluation programme, the management aspect of economy, realism, efficiency, adaptability and dynamism acts as a limiting factor to put the theory into practice. The fact remains that collection of needed evidence depends entirely on how valid and reliable are the tools and which techniques are selected or developed for use.



## COLLECTING EVIDENCES ABOUT PUPILS' GROWTH

### 6.1 Meaning

Implementation of a good evaluation programme depends on the appropriate and accurate evidence that we get about pupils' growth. This is possible only through the use of various types of quality instruments of evaluation. There are a number of data gathering tools and techniques which can be employed at the elementary stage. Before we discuss the role of various tools and techniques let us try to understand what do we actually mean by the word 'tool' and 'technique'.

In educational parlance a '*tool*' is an implement or an instrument or any device which facilitates work or extends its precision, in collection of evidences about a particular person, phenomena or a work. A lever which facilitates the rolling of a heavy log of wood; a question or a question paper which becomes the basis of collecting information about the attainment of certain instructional objectives, a thermometer which extends our precision of measuring body temprature; a record book or a register of attendance which helps use to assess students' regularity or punctuality, are all tools of evaluation. The word '*technique*' is a more comprehensive term which cannotes the process of gathering information or evidences and in that process certain tools may be used. Thus a technique may involve the use of one or more than one tools. Examination for example is a tecehique in which a question paper is used as a tool for collecting information. Tool may be a question paper, a unit test, or an oral test. Likewise, observation is a technique which may involve the use of tools like a telescope, a camera or a lense used to extend our precision in gathering evidences.



## 6.2 Criteria of a good measuring device

Quality of evidence that accrues from the application of a particular tool or technique depends on two factors; the relevance of the tool or the techniques and the quality of the tool or instrument of evaluation used. As regards the selection of a particular device to collect evidence depends upon the objectives to be tested. For example a written test is useful for collecting the information about the cognitive development of the child whereas teacher's observation may be quite alright for judging the students social behaviour. The performance test will be suited for assessment of practical work but will not be practicable to test the effective behaviour.

Apart from the objective, another criterion of relevance is the accordance with the nature of content and the activities undertaken. Certain activities may be more suitable than others. Similarly certain content areas may be more suitable than others for devising a particular situation to test a particular objective. Still another important factor is the extent of reliability that may be ensured. The use of objective type or short-answer questions in preference to essay type questions would definitely ensure more reliability, although both may be used to test the same cognitive objective.

Since the quality of evidence depends upon the quality of tools applied, it is essential that all necessary steps may be taken to ensure the needed evidence. Whatever the instruments of evaluation may be, it must yield and reliable evidence, otherwise whatever goes on after that to process the evidence, is of no avail. Validity of an evaluation instrument is the basic requirement. Unless a tool does not yield the evidence which was intended it does not serve the purpose. Every tool has to be objective based. Care has to be taken that when more than one objectives are to be tested as normally we have in today's system of examination, then proportionate weightage to various objectives should be reflected in the construction of the instrument. Adequate coverage of content and the proportionate weightage to the different sections of the content is another requirement of the validity of the instrument. Overall options, of the five-out-of-nine-type, misleading directional words like 'what do you know of', and use of imprecise and ambiguous language, affects the validity of an evaluation instru-



ment. The factors which affect reliability of the instrument are the form of questions the number of questions testing time, scoring objectivity, uniform instructions to the examiners, directions for examinees, scheme of options etc. Practicability or usability is another aspect which affects the quality of an instrument. Ease of construction, administration, interpretation and time, all influence the practicability of an evaluation instrument.

### 6.3 Relevance of tools to learning outcomes

The relevance of various tools and techniques to the various types of intended learning outcomes are depicted in the chart given in the Annexure.

This classified list would provide a basis for selection of various types of tools and techniques that can be applied by the teachers. Out of these it is only the tests which the teachers are supposed to construct for themselves. Other tools and techniques should be developed by the State Institutes of Education. As far as the development of classroom tests are concerned following guidelines may prove useful :

### 6.4 Guidelines for class tests

Since construction of an evaluation instrument is a function of the purpose and the nature of content, it is difficult to provide many standard guidelines applicable to all types of instruments. Each type of tool ought to be constructed for a particular purpose.

Each tool or a technique of evaluation is used in a particular context to obtain information about particular aspects of students' development. For this, ready-made evaluation tools from different sources may be procured and used. This is possible in case of unit tests or question banks available for certain classes. Likewise certain check-lists, rating scales, standardised tests etc. may also be available for use. Nevertheless, more often than not a teacher will have to make use of his own tools and techniques such as the written tests which will continue to occupy prominent place for quite some time. Such tests may be annual tests, quarterly tests or unit tests. For planning and development of these tests, following steps may be followed.

### 6.5 Steps in tests construction

#### (a) *Designing of the test (Question Paper or a Unit test)*

Every test is designed in accordance with the purpose of the test. This includes identification of instructional objectives, giving weightage to each objective, delineation of the content into units or subunits, giving proportionate weightage to each unit or sub-unit, deciding weightage to different forms of questions to be used, organisation of questions into different sections, scheme of option, if any, time allocation etc.

#### (b) *Blueprinting the test*

On the basis of the design of the test, a blueprint is prepared. This blueprint is nothing but two or three dimensional chart which shows the number of questions along with the marks, pertaining to the different sub-units of the content areas selected to test various instructional objectives as indicated in the design of the test. This also depicts the type of questions to be used with reference to each content unit as well as the objective on which it is based.

#### (c) *Framing of questions*

This is a major part of the test construction and it involves the technical competence of the teacher to frame questions of the requisite variety as indicated in the blueprint. Each questions has to be framed to test a particular objective using the relevant content of the unit. It is clear that care has to be taken to use the appropriate language directional words, form of question etc.

#### (d) *Assembling the questions*

Questions so formed may be grouped together according to the form used. Objective-type questions may be kept at one place, short-answer type at another place and essay-type separately. Their arrangement may be content-wise, objective-wise or estimated difficulty-wise depending upon type of analysis to be undertaken later on.

#### (e) *Preparting instructions*

Instructions which go as a part of the test are meant for directing the students to attempt the questions in a particular manner besides indicating some restrictions, scoring methods etc.



(f) *Editing the questions*

Editing includes checking each question with respect to the objective tested, the key or the outline answer. This also refers to checking all questions on the estimated difficulty levels, the estimated time and the weightage to different forms of questions. In short, editing is meant for avoiding duplication, improving items and cross checking with the blueprint prepared for the purpose.

If we make a general survey of various tools and technique that can be used at the elementary stage, it will include all those techniques which are concerned with testing, inquiry, analysis and observation. Under each of these areas, a further sub-division can be done. Each technique demands a particular tool or a method of collecting evidence and the methodology of its interpretation and forming judgement. Classroom testing and teacher observations are two major techniques which can be used more easily than others. However, with a little training in the concept and use, other techniques can also be employed by the teachers without much difficulty. Following techniques can be used at the elementary stage.

## 6.6 Scope of various tools

(a) *Observation*

It is a purposeful seeing of the behaviour of a student in a particular situation through a well planned and systematic attempt. Therefore, observation is always purposeful, planned systematic and recorded. Subjectivity in observation is natural and is its main limitation. To reduce subjectivity, 'two things can be done'. Either the number of observers may be more than one who later on arrive at some consensus or it may be ensured by observing the behaviour on more than one occasion. If the purpose of observation is clear and the attributes to be observed are pre-determined and the observation is made at a time when the situation is natural, it will improve the objectivity of observation. Sometimes use of certain tools like a lense, a thermometer or a scale may be used to refine observation. One thing which is important is the cautious interpretation of the evidence that collected through.

(b) *Interview*

It is a face-to-face conversation with a purpose. This can be



used profitably when there are individual cases of truancy, aggression, misbehaviour, emotional disturbances etc. The student in question may be called by the teacher for a scheduled interview. Such an interview may be conducted in a congenial atmosphere after creating a report with the student. The major focus in such interview is on discovering the causes and not in prescribing the measures. The idea is to assure or reassure the student to do better. Scheduling, preparing, conducting and reporting the interview are the sequential steps involved in using this techniques.

(c) *Rating Scale*

Rating scale is a tool for classifying students into various categories depending upon their performance on certain objectives like personal and social qualities, which imply qualitative assessment. It is the qualitative nature of the evidence that cannot be rated quantitatively. There cannot be rating in terms of percentages or numerical marks with respect to traits like discipline, civic sense, initiative, cooperativeness, emotional stability, attitudes, interests etc. In all these cases, the evidence has to be expressed in terms of the degree to which that particular behaviour or skills is acquired. This rating can be done on a 3 point, 5 point, 7 point, 9 point or 11 point scale. More commonly, 3 point or 5 point scales are used. These rating scales may be descriptive, the letter grades, numerical graphical or quantitative.

(d) *Check-list*

Unlike the rating scale, a checklist is collection of number of statements pertaining to the assessment of a trait or a scale. Each trait or skill is split up into its component skills or behaviours, the presence or absence of which is judged by means of such a list. It is just like a grocer's list where a particular thing is either available or not available. Therefore, when a particular behaviour is either present or absent, a check-list can be used. It differs from the rating scale in that if an evidence is available in terms of the extent to which it is present or absent it cannot be used. However, on the basis of performance on a check-list a rating can be given.

(e) *Questionnaire*

It is a sort of list of questions which are formed keeping in view the evidence which is to be collected. When information is collected.



by mail it is called a questionnaire but when with the help of the questionnaire the information is collected by face to face interview this may be called a schedule. The main purpose is to get opinion of the students, teachers or other experts on a particular aspect of behaviour.

(f) *Sociometry*

This is a technique of finding out the social relationship among the children of a particular class. It is a very useful technique applicable especially to the primary classes. On the basis of social relationship, popular students, the students who do not mix with other students, or do not adjust with their peers can be identified by the use of this technique. Seating of students, selecting monitors for the class, captain for the games, working groups for practical work etc. can be made scientific by the use of this technique. The simple method is to ask for one, two or three choices of each student with regard to each and then on the basis of first preferential vote, choice can be made for selection or allocation purposes.

(g) *Pupil Products*

Products of students is very useful device for assessment of various traits. Products may be a model, a chart, a composition, a poem or any other socially useful productive work. Such a product reflects both the endproducts as well as the various types of skills and abilities which go to make up the products. Some of these products may be used to test students' knowledge or skills while others can be used to read students' mind. This is besides the dignity of manual labour that goes into the development of the product.

(h) *Anecdotal records*

It is one of the tools for recording a single, specific but significant event or the behaviour of a student observed by the teacher. These records are useful for recording the evidences on any type of behaviour which is significant and qualitatively assessed by the teacher inside or outside the class. Provision is made in a card for the event, its context and the nature of observation. However, it does not include interpretation of the behaviour.

Apart from these tools and techniques, there are many more like assignments, cumulative records, projects, progress charts etc.

which can also be used. Details of each of the above mentioned techniques are not warranted in a document like this. For effective use of these techniques, what is needed is the selection of the right tool or technique, its appropriate use at appropriate time using appropriate method of recording the evidences. Unless this is done, analysis of the evidence would become a difficult task. How analysis is to be done and judgements are to be formed is discussed in the chapter that follows.



## ANNEXURE

*Aspect of Assessment**Cognitive*

## SOME ILLUSTRATIONS

## TOOL/TECHNIQUE

1. Written test	1. Instructional objectives, intelligence
2. Oral test	2. Oral expression, functional understanding.
3. Performance Tests	3. x                      x                      x
4. Observation	4. Home task, classroom participation.
5. Check-lists	5. x                      x                      x
6. Questionnaire	6. Validation of Unit tests, questions.
7. Discussions	7. Argumentation, communication skills.
8. Interviews	8. Problems of under achievement diagnosis, remediation.
9. Opinions	9. Instructional objectives, Instructional process, evaluation procedures.
10. Sociometry	10. x                      x                      x
11. Anecdotal records	11. Significant achievement or inadequacies in performance.
12. Cumulative record and students' products.	12. Sequential records of students' progress over a period,
(a) Students' Compositions	Written expression
(b) Charts and models	Basic pre-requisite knowledge and skills involved & creativity.
(c) Pictures	Basic skills and creativity
(d) Assignments/Projects	Basic skills and creativity

*Affective**Psychomotor*

## SOME ILLUSTRATIONS

- |   |   |
|---|---|
| 1. Assessment of health habits, study habits.                     | 1. Functional understanding relating to skills                                |
| 2. x                    x                    x                    | 2.                    -do-  |
| 3. x                    x                    x                    | 3. Performance in practical work, physical efficiency, other productive work. |
| 4. Habits, attitudes, interests, personal & social qualities.     | 4. Process and product of performance of skills.                              |
| 5. Health habits, study habits.                                   | 5. Processes of performance relating to skills.                               |
| 6. Attitudes, interests, teachers' assessment.                    | 6. x                    x   |
| 7. Scientific attitudes   | 7. x                    x   |
| 8. Problems of personal and social adjustment.                    | 8. x                    x   |
| 9. Attitudes, interests, social relationships.                    | 9. x                    x.  |
| 10. Relationship among students                                   | 10. x                    x  |
| 11. Significant and outstanding behaviour manifestation.          | 11. Significant performance or lack of it.                                    |
| 12. Record of affective behaviour over a period of time.          | 12. Record of level of proficiency in various skills over a period.           |
| (a) Identifying projected views about people, programmes, things. | Writing skills.   |
| (b) Indirect assessment of interests.                             | Manipulative and drawing skills.  |
| (c)                    -do-                                       | Drawing skills  |
| (d) Assessment of interest and personal qualities                 | Manipulative/drawing skills   |



## VII

### ANALYSIS, INTERPRETATION AND FEEDBACK OF EVIDENCES

#### 7.1 Recording Information

Relevance of the various tools and techniques to the types of information needed is discussed in the last chapter. Administration and scoring of the tests or other tools of evaluation also affects the data to be gathered. Therefore, the necessary precautions in administration are taken to prevent contamination of data. Similarly the scoring is undertaken with a view to ensure maximum scoring objectivity. For this, freedom from bias, consistency in scoring and double check are the three main safeguards.

Information needed may be test scores, quiz scores, record of attendance, observation of performance, observation of participation in the classroom, list of assignments completed, performance on assignments, anecdotes of the significant aspects of behaviour, socio-metric data, notes on participation in co-curricular activities, data gathered through inquiry techniques etc. Past judgements and decisions can be used to form new judgements and decisions.

For recording test data it may be advisable if the code or serial number of the test, scheduled date, description of tests, location of test copy, testing conditions (context), summary statistics and comments if any may be provided on a sheet which becomes the part of the file. Similarly for recording data on observation a format may be devised to record information gathered through rating scales, checklists, anecdotal record etc.

As for recording of data from inquiry techniques, like that of questionnaires, rating scales, checklists, interviews, sociometric devices etc. is concerned, would depend on the basis of summarisation of evidences, in terms of the initial hypotheses framed. These can however, be compiled as common record for all teachers using these tools and techniques.

Recording of data relating to analysis of products should be done on the basis of clear description of what was measured or what was expected from students. What were the rules of assigning marks or grades and the constraints placed on them, are other two factors worth considering.

Whatever the mode of recording is adopted it must be practicable. Keeping unwieldy records are neither useful to the students nor easy for the teachers to maintain and analyse. Simplicity, security, updatedness and readability of records are essential features of good recording, that makes the record usable. Therefore, keeping in view the limitations of the elementary teachers, the recording proforma and procedure should be so developed that it is easy for ordinary teacher to tabulate, collate, maintain, update and use records efficiently. Maintenance of good records is a management skill which every teacher should acquire. It is on the basis of these records that further analysis depends.

## 7.2 Analysis of Evidence

Analysis of evidence follows collection of information about students. In fact, with the tabulation of data, analysis activity starts. How best to do the analysis depends on the use to which data or the evidences, are put. Are you going to grade, certify, classify, promote or compare the students? Are you interested in providing remediation to weak students or are you more interested in judging the instructional efficiency in terms of intended learning outcomes? Perhaps above all we are more interested in improving pupil's learning. This requires analysis of shortcomings in learning and teaching as well as in evaluation itself. Thus depending upon its use analysis can be taken up in terms of the individual performance class or group performance or in terms of standard or criterion of performance each of which is explained below:

### (a) *Self-referenced*

Analysis can be done in terms of the individual students without reference to the class as a whole. This means the performance of the individual is judged in terms of his own abilities, and efforts. The assumption is that every individual learner has different social, educational or experiential background which condition his mode and speed of learning. This means that if analysis is done in terms



of his own performance, progress and targets it provide better feedback for his or future achievement besides determining his rate of progress in terms of past achievement.

*(b) Group-referenced*

Another way of looking performance of a student is to compare his achievement with his class fellows in the same section or class. This can also be done with reference to all schools in a district or a Board of school education at the state level. Here the purpose is to judge the individual against a norm or average performance of the group. This is generally done at present in most of the examinations. The purpose in such examination is to classify students for promotion or grading them as first, second, third divisioners or as failures. At the elementary level, idea of failure is intolerable. Therefore, unless administration or a supervisor is interested in comparing the general performance standard of different institutions or sections within the same institutions, group or class referenced analysis is not called for. This causes more harm than good to the weak students who develop negative self-concept about themselves because of knowledge of more and more of their inadequacies rather than adequacies. It is desirable, therefore, that as far as possible, analysis in terms of class may be avoided to discourage unhealthy practice of comparing poor students with brighter ones.

*(c) Criterion-referenced*

Another way of analysing the evidence is to compare an individual's performance with reference to a criterion or criteria set in advance. Every instructional effort is directed to some predetermined outcomes of learning. This may be the instructional objective of a unit or an expected learning outcome, a particular level of proficiency in a skill or a minimum mastery level of achievement. In a class-referenced or norm-referenced objectives where, say, in English spellings, one may be satisfied with 4 out of 10 correct spellings. In contrast, the criterion referenced approach emphasises that a minimum of eight or nine out of 10, correct spellings can be considered the desirable mastery level. The assumption is that unless a student masters almost all the concepts at a lower level, it becomes difficult for him to benefit optimally in learning of other concepts higher in hierarchy. Thus if we are more interested in bringing up students to a particular level of mastery to



enable them to derive maximum benefit from further instruction, than this approach is the one which should be accepted especially at the elementary stage. It envisages a clear cut sequential steps representing different levels of proficiency in skill or conceptual learning. Therefore, analysis of evidences about pupils' growth can and rather should be done in terms of predetermined acceptable level or standard of performance. According to this approach every individual is supposed to reach almost the same level (intended) of achievement or performance although some may take more time than others to reach that level. From this we may conclude that analysis done in terms of the individual with reference to the criteria of performance is more desirable.

### 7.3 Forming judgements

Once analysis is made of the evidences, next step is to form judgements through interpretation. Evaluation is a process of making value judgements. Giving grades, diagnosing students' weaknesses, predicting success etc. are day-to-day judgements that teachers are making. It is on the basis of these judgements that decisions are taken with regard to promotions, remedial work, instructional strategy etc. Such judgements are based on proper interpretation of scores and assignment of grades and then predictions can be made on the basis of judgements formed.

Interpretation of scores or for that matter any kind of evidence depends on the conversion of scores or evidence into more meaningful terms so that the users can understand it better. For this, comparison of scores or evidence to some referent is essential whether it is the unit objectives, the class or the individual himself. This is necessary for interpretation which becomes the basis for estimative judgements that lead to making predictions. Most of the judgements are norm referenced judgements on the basis of which decisions are made. As such the comparison of an individual's performance with the average performance of the class or some other group is done. Ranking students on a test is one example of this type. Standard scores, grade equivalent scores and age equivalent scores are other examples of the types.

In case of criterion referenced judgements it becomes difficult to estimate student's ability confidently because of the less number of items on each of the criterion behaviours. In day to day class



room estimates on teachers' assignments and tests, values are assigned in the form of grades A, B, C, D, E etc. Such judgements are made sometimes according to normal curve, or as percentage of correct scores, level of achievement or grading on a standard (mastery) judgement or self-referenced judgements.

To make predictions in class-room, what is needed is the selection of the predictor, obtaining information about student's performance, get data on predicted variable and estimate the relationship between the two sets of data. Thus formation of judgements is closely related to the referent used and the mode of interpretation.

#### 7.4 Decision making

Judgements are used in making decisions which in fact is the ultimate aim of evaluation. Therefore, learning to make judgements for better decisions is essential for a class teacher. Since faulty judgements can lead to wrong decisions it is essential that judgements should be verified first and then only decisions may be arrived at. To verify the judgements we would first check the accuracy of information. This means that one should not only check for the relevance of the data gathering instruments but also their reliability. Depending upon the error of measurement of the evaluation instruments, if error of measurement is appreciable, judgement making is of no avail. In such a case it is better to get further empirical evidence or be prepared for review of decision. To get empirical evidence hypotheses based on judgements can be formed and then tested. If judgements are verified decisions may be made.

Although decision making is as complicated a process as that of forming judgements, yet a critical approach helps the teacher to avoid decisions which are later on reversed. Common causes of faulty decisions may be imprecise statement of instructional objectives, taking cognizance of a few alternative solutions, failure to visualise the consequences of each alternative possible action, use of faculty judgements already made and the failure to remain conscious of professional ethics.

While making decision we may be clear as to what a good decision is? A good decision for example must be workable in the natural setting of the class or the school. Quick and timely decisions help the students and teacher's about their courses of action.



Decisions need not be sequentially taken in chronological order since this involves going forward and coming backward approach. Another criterion is the allowance to the teacher to exercise his value on those elements which he considers important.

Whenever decision are to be made about, say; grading, certifying, remediation, change in teaching methodology or modification in time table etc.; following steps are involved:—

(a) Be cognizant of your objective. Specify it in clear-cut specific behaviours or expected learning outcomes or desired level of proficiency.

(b) Identify all possible alternatives. In a remedial programme for example whether to reteach, give an assignment, undertake a project etc. are the probable outcomes of each of these alternatives. Therefore, specify the probable outcomes of each of those alternatives which are possible.

(c) Consider the likely consequence of each of the courses of action visualised along with the probable outcome. To what extent an outcome is likely to occur and the extent of its likely consequences would help you to eliminate the alternative one by one.

(d) In the light of your specified objectives or values implicit in such decision, choose the best alternative. This is facilitated by giving appropriate values to different alternatives and weightage to the probable outcomes. Thus the value we place on possible consequences, the probability of expected learning outcomes and the extent to which such outcomes relate to the desired outcomes, facilitates decision making.

## 7.5 Summarising and Reporting

Decision making is followed by summarisation and reporting on the one hand and diagnosis and remediation on the other. First aspect is taken first for discussion. When decision is taken about the acceptability of the performance of a student or a class, the next step is to make a summary of his performance and report it to the users. In summarising the evidence a teacher tries to know as to what the evaluation judgements have been formed out to communicate it to its users. It is therefore, important for teachers to learn the technique of summarising the results and apply specific rules to report the results to those who are interested in the improvement of pupil's learning.



Numerical single score subjectwise data which have been in vogue since long, smacks of authoritarian approach and bureaucratic convenience of recording, filing and storing record in the past. His Majesty's Inspector's self-collected measurement data which outweighed any of teacher's own assessment of students, perhaps was the main reason in the past, on the long emphasis on testing, to the complete exclusion of other data gathering devices. But now with the variety of data on different aspects of student's growth, summarisation has become more cumbersome and technical.

Properly summarised evaluation data provide basis for making further judgements and decisions by students, parents, teachers, administrators and other users. Such summaries are useful in indicating the rationale used for the judgements made or decisions taken and can also be used to defend these while evaluating data. Even one can determine the cause of certain unplanned instructional objectives at a particular time. Meaningful summaries are thus essential for producing written or oral reports.

#### (a) *Summarising*

First requisite for preparing a good summary is to identify the clientele. Who is the summary about? Is it for a student, group, section, class, a special group, a teacher? What is your summary about? For whom the summary is being prepared? Are we preparing summary for parent teacher meeting, annual day reporting to parents or to the class? Content of the summaries depends partly upon whom you are going to report. Summaries indeed should be made by the teacher and for the teacher because by and large these summaries are to be used by him to improve student's learning and his own teaching. Next question is about the use of summaries. What for a summary is to be used? This determines the types of reports to be prepared and the actual use to which a report will be put. Letter, report card, conference, diagnostic report, action report etc. Each has a different technique for summarisation. As for use of report which determines the mode of summarisation, the teacher should consider the use in terms of placement in remedial class, warning for lack of attendance, award for best student, timing of completion or beginning of a unit, selection of students for an inter-school debate etc. Besides the purpose, next item for reporting is the listing of the major decisions made. Choose only the critical decisions in order from the most recent ones to the remotest past.



While summarising the list of decisions it is better to indicate along each decision conveyed, the judgements of the teacher which influenced those decisions. Likewise, the information that led to particular judgements should in brief be indicated to show the basis of making judgements should in brief be example, to disallow student of class IV from proceeding to the units of the class V, say in an ungraded school, may depend on a teacher's judgement that he is almost two or three units behind the other students. Information in support of this judgement which forms the basis of the summary report, is his test scores, say, on sequential tests for units I to IV. Therefore, summary includes critical decisions based on judgements formed and supported by information that led to those judgements.

#### *(b) Reporting Results*

Reporting time may be preplanned or sometimes it may be unplanned. A report means communicating the summarised evaluation data to the users. It could be formal or informal, written or oral. Whatever the format of communication may be, a good evaluation report must be very clear, unambiguous and easy to understand. It must also include all the minimum information essential to the intended users. To report evaluation results, a few tips may be useful for teachers to make reporting more valid and meaningful. Make a clear statement of what is being reported i.e. whether it is something about the behaviour, class performance or parents' meet that something is communicated to them. Since information may contain some technical terms or symbols, some guidelines must be provided to interpret the information in the report. Every effort should be made to state the information in a direct form. It should be given in such a form that it becomes meaningful and actionable on the part of the recipient. For example, saying, "your ward is not pulling on well", is meaningless to the parents but saying, "he is weak in English spellings when compared to his class mates", is more meaningful and they can take some action on that by giving him dictation or spelling tests at home. Wherever necessary, information used to form judgements on the basis of which decisions were made, can also be explained to the users. These are the general observations and guidelines for reporting. Details of specific reporting methods, like those of report cards, letters, diagnostic reports, conferences,



etc. are not called for in this document. Reporting is, therefore, the service component of the evaluation process on the basis of which relationship among teachers, students and parents is established.

### 7.6 Diagnosis and remediation

The very concept of evaluation is integral part of the teaching learning process envisages role of evaluation as a diagnostic device. It aims not only discovering the weaknesses of students but also in uncovering the deficiencies in instructional system. As it was mentioned in the last point, decision taking is followed by summarisation and reporting. Alternatively, if according to our estimate the student has not come up to the level in terms of expected learning outcomes there is need for diagnosis of the reasons or the causes responsible for under achievement. Diagnosis may be focussed on the teaching learning process or more often on the pupils. Ultimately we are concerned with improvement of students' learning. Hitherto, emphasis has been on measurement of students' growth without giving attention to the factors or conditions that might have lead to the under achievement or low rate of progress. Giving more attention to and providing the needed remediation or alternatives to the weaker section of students hardly bothers any teacher. If at all some teachers are really bothered, they are concerned more with the improving of class results for the administrators or inspectors than with the improvement of students' learning. How long can we remain oblivious of the high rate of stagnation and wastage at the elementary stage? As long as we are not interested in finding out the weaknesses of the weak students, the extensity of stagnation and ultimate wastage cannot be checked. Diagnosis, is therefore, of necessity, imposed by the judgements formed from the evaluation data. Indeed, diagnosis must be considered a sacred service of the teaching-learning process which must be performed continually by every teacher, the evaluator or rather the teacher-evaluator.

Diagnosis forms the basis for future learning tasks as one hour spent on diagnosis saves two on remediation. Today's two hours of remediation saves, four hours of tomorrow's teaching. In case timely diagnosis and remediation are not undertaken, the Peter Principle works and the level of incompetence viz., non-com-



prehension goes on increasing till a stage comes when no further learning is possible. It is this long-ranged deteriorating impact which need be safeguarded or prevented by using well planned diagnostic techniques at appropriate timings of the year or course of instructional sequence. A number of steps may be taken for diagnosis of students as under:—

(a) First thing is to analyse results of every summative unit test on the basis of which quality of evaluation instrument should first be verified at least on the basis of students' responses. A very difficult or very easy test may either rate most of the students poor or most of the students as bright. Further action for remediation would be unjustifiable in such a case.

(b) Assuming that evaluation instrument is alright, try to identify the weak students whose performance is not upto the desired optimum level.

(c) Identify the causes of weaknesses of students. Causes may vary from student to student. Some of these causes may be educational and while others may be non-educational. The former refers to teaching-learning difficulties while the latter refers to emotional, psychological, physical or social causes.

(d) Devise ways and means to investigate in details (not always) and pin point the areas of immediate attention. Depending on the nature of the cause, various techniques like teacher's own observation, pupil-teacher discussion, use of diagnostic tests, analysis of errors etc. can be used.

(e) Classify the students into different groups on the basis of similarity of weaknesses so that individual or group action may be taken.

(f) Provide remedial action which may take the form of reteaching, reassurance, drill, reorganisation of group etc. This requires not one stage remediation but terrace-levelling-approach. It starts from the lower most group (weakest) to upgrade it to the next level and ultimately bring different groups at the same highest optimum level expected in terms of learning outcomes.

(g) Test again after remediation to see that all students have reached that intended level of performance or achievement. This completes the complementary cycle which emerged from the decision making stage. Now it is followed by summarisation and reporting of results as in case of the other group, discussed in previous pages.



### 7.7 Feedback of results

Since focus of evaluation is on improvement of learning and instruction, evaluation process is not complete until the evidence is made use of for this purpose. Feedback mechanism of evaluation provides feedback loops to improve learning, test efficacy of objectives, improve instruction, improve curriculum, provides guidance and generates action research for further improvement of evaluative process. Each of these aspects is explained herein after.

#### (a) *To promote learning*

Day-to-day assessment of students' work makes them regular in their study habits. Better evaluation through wide variety of tools and technique will no longer allow rote memorisers to cut do others.

Assessment of pupils' performance makes them understand the level of learning the various concepts. Moreover when the results are at hand they must be immediately feedback to students, teachers and if needed to parents also. As for students, immediate feedback about their performance helps in reinforcement of what is learnt. At the same time, knowledge of inadequacies provides the direction for further improvement. The significant contribution that results can make is the development of positive self-concept among the pupils. This can be done by feeding the learner continuously with the adequacies in his learning. This acts as a great motivating device for further learning.

#### (b) *To improve instruction*

Besides improving learning, use of test results can also be made for improvement of instructional strategies. Purpose of teaching determines the kind of measurement to be used. Results of measurement indicate the emphases laid in teaching. If the students have not learnt well, the teacher has not taught well. Quality of teaching is reflected indirectly in pupils' learning. On the basis of students' performance a teacher has to rectify his mistakes of the past and prevent their reoccurrence in future. Attainment level of students on various instructional objectives or even on specific learning-outcomes indicates success, failure or weakness of the methods and materials used in instruction. But this inference could be drawn only when accumulation of results over a period of time is



accounted for such an interpretation. Similarly content-wise analysis of performance may also indicate whether a module or a unit has been learnt well or failing that it might require replanning or/and reorganisation of activities. Therefore, using analysis of test results for improving methodology of teaching and learning is the need of the hour.

*(c) To provide guidance*

Measurement and guidance go altogether. Guidance without measurement loses its scientific character, while measurement without guidance loses its purpose to a great extent. Results indicate the area of successes and failures on the basis of which future success can be predicted. Students who are poor around can be located and the causes of their weaknesses explored. Then the needed guidance services can be provided. Study habits are conditioned by the method of examinations because the students prepare for those very objectives for which assessment is made. On the basis of high scores in certain subjects students can be guided for selecting the right courses to help them make their vocational choices later. Results can also be used the teacher to individualise instruction for certain students to provide for remediation or enrichment to certain individuals or a group of students.

*(d) To judge the efficacy of the objectives*

A thorough examination of the test results can help the teacher to see whether the objectives set-forth are achieved or not. The constant poor results in relation to a particular objective may indicate that the objective may be above the level of students and therefore, needs modification. On the other hand a situation may be, where most of the students might do exceptionally well. The other things remaining the same it might reflect the lower level of the objectives which may be suitable for the grade lower than the present one for which the test was designed. Likewise, if results are analysed in terms of each specific learning outcomes implied by each objective, it can also serve as a basis for modification, deletion or addition depending upon the level of performance on each. Thus results can be used for validating the instructional objectives also.

*(e) To improve curriculum*

Test results can throw light on whether the prescribed curriculum



suit the learner or not. Analysis of results may indicate too difficult or too easy areas of content which might be dropped or modified. Which area or topic needs more emphasis? Which topic needs less emphasis? Which concepts should be excluded because of their misplacement in a particular grade? Is there any need for rearrangement of the topics for better learning? Does grade placement of certain concepts need further investigation? All such improvements relate to curriculum and can be made if the results are properly used after scientific analysis.

*(f) To promote action research*

Action research is a means of finding out the truth regarding questions of practical importance concerning the job and not the research dealing with theoretical questions or eternal truths. Indeed it is related to curriculum and instruction. As revealed in the results, advantage can be taken of the analysed data to use them in finding out the solutions of certain problems like the impact of certain teaching methods, choices of questions, in a question paper; types of options; allotment of marks for individual question; etc., The teacher, for example may notice during analysis of test results that almost all students of his Section A secured comparatively more marks than their counter-part in Section B, assuming both sections being equivalent sections. On scrutiny it was found that marks allotted to each question were 5 for Section A and 10 for students of Section B. It is here that the teacher can sense the problem and undertake a small class investigation to know the effect of allocating marks to an individual question, on the reliability of marking. Results of such a study would help the teacher to allot marks in such a way that it leads to more reliable scores.

From the foregoing exposition one may appreciate that evaluation of a student in any area of his growth and development does neither end with collection of measurement data nor with its analysis and judgement making functions but goes beyond that to feedback results to all the components of the educational process. It is this use of the results of evaluation that helps the teachers to improve the formulation of instructional objectives, provide suitable learning experiences, identify teaching learning deficiencies and even judge the effectiveness of the evaluation programme itself.

### 7.8 To sum up

In the foregoing pages theory of evaluation at the elementary stage is discussed. Appraisal of the existing position followed by role of objectives, approach to evaluation, construction and use of different tools and techniques, analysis and recording of evidences, forming judgements and taking decisions, diagnosis and remediation, summarization and reporting and finally the use of results for improving the whole teaching learning process have been described. It is on this basis that now we are in a position to propose a theoretical framework for evaluation in the elementary schools which in turn would form the basis for developing the action plan for improvement.



## VIII

### AN INTEGRATIVE MODEL OF EVALUATION

#### 8.1 Introduction

Whenever one thinks of reform in the field of education it is the convenience of numbers, better communication with teachers and availability of the technical know-how and of course the financial resources that determine the priority area for improvement of reform. It is for this reason that elementary stage has always been relegated to the secondary or tertiary position whenever question of qualitative improvement cropped up. This is equally true for the area of examination reform at the elementary stage. A lot of work has been done at the university stage and more so at the secondary stage but the stupendous task of improving evaluation practices at the elementary stage has been kept at bay. In fact, primary education particularly did not receive the needed attention.

It is for the first time that in the Sixth Five-Year Plan of Education, universalization of primary education and its qualitative improvement has been given the first priority. When different aspects of elementary education are considered, evaluation is one of its significant aspects which provides quality control to the educational process. As such it is essential that place of evaluation in the total curriculum of elementary education, its role and mechanics be clearly understood to appreciate the need for its improvement and reform.

When compared to higher secondary stage some significant departures have to be made due to certain fundamental issues relating to the needs of the learners at this stage, the learning mode, nature of content and use of instructional technology. Each of these issues is explained here-in-after.

## 8.2 Significant Departures at elementary stage

Since evaluation is an integral part of the teaching-learning process an improvement or reform in evaluation cannot be thought of in isolation. What is fundamentally different in different components of teaching-learning process at the elementary stage, is bound to have its implications for teaching and evaluation. Therefore, there is need for visualising the significant departures in the expected learning outcomes, nature of content and its organisation, methodology of learning and teaching and mode of evaluation as compared to that of higher stages of education.

Why should there be any departure in improving evaluation at the elementary stage? Firstly; the most cogent reason is the *characteristics of the learners* at the elementary stage. Children have far more variation in their educational antecedents than at Secondary stage. They have varied rates of learning due to different entry behaviours in terms of their home and educational environments. They need individualised instruction and as such demand different styles of instruction. Observing, exploring, reciting, enjoying, rhymes and drilling, manipulating, urge for success and belongingness, enjoying by doing things by hands, are among others, some of their significant characteristics which must find expression in learning. Each of the above mentioned characteristics has corresponding implications for teaching and evaluation.

Secondly, apart from learner, *the process of learning* also imposes some conditions having bearing on teaching and testing. Affective entry behaviours, maximal involvement of learners in learning activities, collateral effects of instruction, knowledge of success in learning tasks and comparatively more weightage for affective outcomes, are the academic demands which need more consideration at this stage as compared to higher secondary stage.

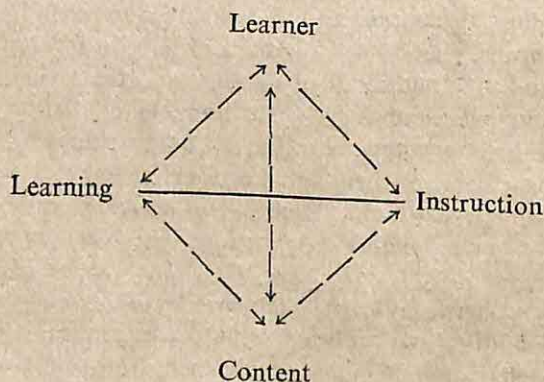
Thirdly; *nature of content* which forms the warp and woof of the subject matter, also determines the nature of instrumentation. Compared to higher secondary stage the technology of questions must reflect meaningful, environmental and integrative content. Appropriate density of scientific terms and language vocabulary, greater use of graphic material, activity-based learning tasks are some of the features that have bearing on teaching and testing of students at the elementary stage. Basically it refers to the substantive



structure of a discipline wherever disciplinary approach is adopted at the middle stage.

Fourthly; it is the *quality of instruction* that minimises or maximises the gap among students' learning of a unit. To reach their optimal level learners need different instructional methodologies and require varying amount of time for learning the same task. With different cognitive and affective entry behaviours, students' rate of learning varies depending upon their ability to benefit from instruction, time spent on learning and the methodology of instruction. Therefore, role of cue, learner's index of involvement, reinforcement, diagnosis, remediation and using evaluation as feedback are all matters of greater concern to the teachers and evaluators at the elementary stage.

Interaction of all these four aspects can be schematically represented in the following diagram:



### 8.3 Assumptions

Since a theoretical model is developed on certain assumptions an attempt is made here to identify first the relevant assumptions about learner and the learning process. Corresponding implications for teaching and evaluation are traced. For better understanding of relationship the underlying assumptions are identified and the corresponding implications for teaching-learning and evaluation are worked out and presented in columnar form here-in-after.

<i>Assumptions</i>	<i>Implications for teaching and learning</i>	<i>Implications for evaluation</i>
8.4.1 If pre requisite entry behaviours are adequate, children learn with ease and satisfaction and developmental teaching is facilitated.	<p>(A) Identify students' cognitive entry behaviours (C,E,B.)</p> <p>(B) Identify students' affective entry behaviours (A,E,B.)</p> <p>(C) Provide needed remediation if pre-requisite entry behaviours (R,E,B.) are inadequate.</p> <p>(D) If R,E,B. are adequate than start developmental teaching.</p>	<p>(a) Pretest for pre requisite entry behaviours (R,E,B.) using oral tests and observational techniques.</p> <p>(b) Analyse students' performance on the previous unit tests.</p> <p>(c) Construct and use diagnostic tests.</p> <p>(d) Test for R,E,B. after remedial instruction.</p>
8.4.2 If children are taught in accordance with their style of learning it enhances their speed of learning.	<p>(A) Provide for individualised instruction.</p> <p>(B) Try different approaches for different groups of individuals.</p> <p>(C) Provide for self-study or independent learning.</p>	<p>(a) Use individual rather than class testing.</p> <p>(b) Use different tools and techniques for different students.</p> <p>(c) Use questions as a teaching device to test various levels of learning.</p> <p>(d) Use unit tests for summative evaluation at the end of a unit.</p>
8.4.3 Different children need different amount of time to learn a particular learning task.	<p>(A) Let each student or group of students proceed on self-paced speed.</p> <p>(B) Provide additional help to the needed ones.</p> <p>(C) Allow students to switch over to next unit of learning only when previous one is mastered.</p> <p>(D) Provide for remediation to those who are partial masters.</p>	<p>(a) Use task-wise sequential tests.</p> <p>(b) Allow flexibility in scheduling of tests.</p> <p>(c) Use criterion-referenced tests.</p> <p>(d) Encourage self-evaluation by students using prepared mastery tests.</p>



<i>Assumptions</i>	<i>Implications for teaching and learning</i>	<i>Implications for evaluation</i>
8.4.4 Children enjoy learning by doing which facilitates development of concepts.	<p>(A) Specify the expected learning outcomes of each activity (cognitive &amp; affective).</p> <p>(B) Identify activities interesting to students.</p> <p>(C) Select activities relevant to unit objectives as in (A).</p> <p>(D) Provide needed cues.</p> <p>(E) Secure maximum involvement/participation of learners.</p>	<p>(a) Identify the basic and integrated skills to be tested.</p> <p>(b) Select activity-based testing situations to assess pupils' performance.</p> <p>(c) Construct activity-centered questions and other tools of evaluation.</p> <p>(d) Use product of activities for judging students' learning.</p> <p>(e) Make process of learning (process objectives) the focus of evaluation.</p>
8.4.5 Equality of learning outcomes can be ensured for almost all children if needed time, help and quality of instruction are provided to the learner.	<p>(A) Provide correctives to minimise the gap in entry behaviour of the learner.</p> <p>(B) Provide additional time or help to those learners who need to master the learning task before they take-up the next unit/learning task.</p> <p>(C) Provide correctives for those learners having partial mastery at the beginning of each of the lower primary, upper primary and secondary stages.</p>	<p>(a) Pretest for requisite entry behaviour of learner.</p> <p>(b) Identify partial masters of the learning unit.</p> <p>(c) Use diagnostic tests if needed.</p> <p>(d) Analyse results in terms of criterion behaviour.</p> <p>(e) Interpret mastery of the learning task in terms of expected learning outcomes (unit objectives).</p>

<i>Assumptions</i>	<i>Implications for teaching and learning</i>	<i>Implications for evaluation</i>
8.4.6 Reinforcement of learning and feedback improve students' learning and provide motivation.	<p>(A) Provide reinforcers during development of concepts.</p> <p>(B) Use objective-based questions at all levels to diagnose pupils' strengths, and gaps in pupils' learning.</p> <p>(C) Provide for appropriate incentives.</p> <p>(D) Acquaint student with their performance regularly and immediately after testing.</p> <p>(E) Motivate students to take test frequently.</p>	<p>(a) Analyse test results to reveal students' strengths and weaknesses for their knowledge.</p> <p>(b) Inform students of the adequacy of their performance before he is allowed to take up the new task.</p> <p>(c) Report the result in terms of individual performance highlighting what is mastered.</p> <p>(d) Test frequently to help the slow learner by giving him knowledge of his performance and develop sense of accomplishment.</p>
8.4.7 Good evaluation promotes better learning and efficient teaching.	<p>(A) Make evaluation as integral part of teaching.</p> <p>(B) Use objective-based questions during developmental teaching.</p> <p>(C) Use mastery learning strategy of using mastery questions.</p> <p>(D) Provide self-learning assignments like quizzes and programmed material.</p>	<p>(a) Construct valid and reliable tools of evaluation.</p> <p>(b) Make evaluation a continual process.</p> <p>(c) Make evaluation comprehensive.</p> <p>(d) Test for mastery learning.</p> <p>(e) Use evaluation data for diagnosis rather than for grading of students.</p> <p>(f) Form criterion-referenced judgements.</p> <p>(g) Feedback evidence regularly to the learners.</p>



### 8.5 Broad Criteria

From the foregoing tripartite description regarding interaction of teaching and testing in relation to various assumptions one can distill over some of the lurking criteria for evaluating students at the elementary stage. For accepting a criterion certain criteria can be applied. These are, the purposes of elementary education, relationship of instruction and evaluation, equality of learning (not learner) mastery learning and testing for mastery, differential educational antecedents and quality of instruction besides, of course the functionality aspect.

The evaluative criteria evolved from the rationale given above, form the basis for working out the model. These criteria emphasise that evaluation at the elementary stage should as far as possible be individualistic, diagnostic and comprehensive in nature. Each criterion has a corresponding implication for process of evaluation as delineated below:—

<i>Criterion</i>	<i>Corresponding implications</i>
Evaluation should be :	(a) Use of Self-evaluation.
(i) Individualistic.	(b) Using individualised tests.
	(c) Analyse results in terms of rate of learning of each individual.
	(d) Make judgements in terms of individual learner (self referenced), not the class.
(ii) Flexible.	(a) Scheduling of tests for different groups of individuals at different times.
	(b) Learning of units to be tested at the time suited to the individual.
	(c) Staggering of timing of repeat tests.
	(d) Variety in the use of type of tests for different groups.

- (iii) Mastery oriented.
  - (a) Use of criterion referenced tests.
  - (b) Testing for mastery of concepts/skills.
  - (c) Criterion-wise interpretation of results.
- (iv) Integrative.
  - (a) Use of integrative content.
  - (b) Unit testing and teaching.
  - (c) Use of objective-based questions.
  - (d) Objective-cum-activity based questions.
  - (e) Use of readiness tests.
- (v) Diagnostic.
  - (a) Frequent evaluations (continuous).
  - (b) Diagnostic testing and remediation.
  - (c) Self-referenced judgements.
  - (d) Reporting of strengths and weaknesses.
  - (e) Adapting teaching-learning strategies.
- (vi) Comprehensive.
  - (a) Evaluation of cognitive, affective, and psychomotor outcomes of learning.
  - (b) Use of oral tests and other techniques of evaluation.
  - (c) Involvement of students, parents, peers, and teachers for gathering evidences about pupil's growth.



### 8.6 Purposes

Based on criteria mentioned above the following purposes of evaluation can be delineated for the elementary stage.

(a) To obtain needed data to measure pupils' achievements and instructional efficiency in terms of intended-learning outcomes.

(b) To diagnose teaching-learning deficiencies of pupils and teachers.

(c) To analyse the obtained data for forming judgements about the learners and the learning process.

(d) To use judgemental data for taking decisions for improving students' learning and the process of learning/teaching.

(e) To provide basis for reinforcement of learning and provide the needed correctives.

(f) To use evaluation as a means to adapt the teaching-learning strategies.

(g) To use evaluation data as a means for judging the effectiveness of an educational programme.

### 8.7 Major Steps

Keeping in views the above purposes we may identify the following major steps of an evaluation programme.

- |  |   |                          |
|--|---|--------------------------|
| (i) Information gathering                                | <div style="display: inline-block; vertical-align: middle; font-size: 4em; line-height: 1;">{ { {</div> | PUPIL<br>EVALUATION      |
| (ii) Information processing                              |   |                          |
| (iii) Forming judgements                                 |   |                          |
| (iv) Taking decisions/action                             |   |                          |
| (v) Summarising evidence and reporting                   |   |                          |
| (vi) Feedback of evidences                               |   |                          |
| (vii) Appraising teaching-learning process               | <div style="display: inline-block; vertical-align: middle; font-size: 4em; line-height: 1;">{ { {</div> | CURRICULUM<br>EVALUATION |
| (viii) Appraising the effectiveness of the programme     |   |                          |
| (ix) Terminating, modifying or continuing the programme. |   |                          |

PROGRAMME  
EVALUATION

### 8.8 Related Components

As teacher-evaluators we are more concerned with pupil evaluation. We may, therefore, derive the various components corresponding to each of the steps listed under pupil evaluation only.

#### ABOUT

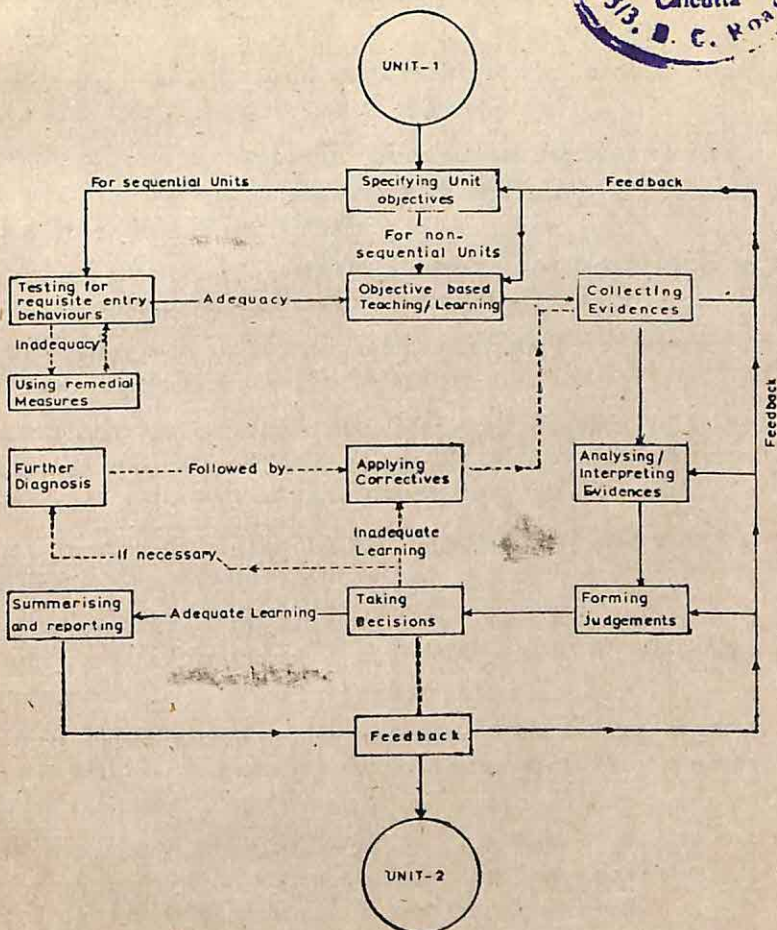
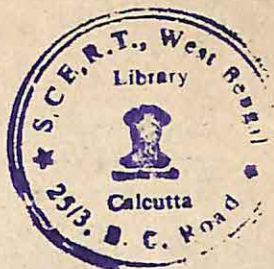
- |  |   |
|--|---|
| (i) Information gathering                | <ul style="list-style-type: none"> <li>(a) Specification of unit objectives.</li> <li>(b) Testing for requisite entry behaviours.</li> <li>(c) Knowledge of Teaching-learning activities provided.</li> <li>(d) Developing and using Post-instruction test of learning-outcomes.</li> </ul> |
| (ii) Information processing              | <ul style="list-style-type: none"> <li>(a) Analysis of data in terms of specified learning outcomes.</li> <li>(b) Recording of evidences.</li> <li>(c) Analysing the evidences.</li> <li>(d) Interpreting the evidences.</li> </ul>   |
| (iii) Forming judgements:                | <ul style="list-style-type: none"> <li>(a) Self-referenced. (Individual based)</li> <li>(b) Criterion-referenced. (Unit objectives-based)</li> <li>(c) Norm-referenced. (Group-based)</li> </ul>  |
| (iv) Taking decisions                    | <ul style="list-style-type: none"> <li>(a) Certify adequacy of learning on the unit.</li> <li>(b) Apply correctives.</li> <li>(c) If needed, further diagnosis followed by use of correctives.</li> <li>(d) Testing for adequacy of learning.</li> </ul>                                    |
| (v) Summarising and reporting evidences. | <ul style="list-style-type: none"> <li>(a) Specify purpose of reporting.</li> <li>(b) Mention major decisions taken.</li> </ul>   |



- (c) List the judgements which formed the basis of decisions.
- (d) Summarise information used to form judgements.
- (vi) Feedback of evidences for improvement.
  - (a) Judging the relevance of intended learning outcomes.
  - (b) Judging the effectiveness of instruction.
  - (c) Judging the efficiency of data gathering devices.
  - (d) Judging the efficacy of correctives.

### 8.9 Inter-relationships of components

Criterion components identified above may be integrated into one complete system in the form of an integrative model. To avoid further description the following scheme depicts the relationship among different components of the model based on Unit teaching-testing approach:



## An Integrative Model of Evaluation (For Elementary Schools)



### 8.10 In conclusion

From the descriptive and explanatory aspects we now turn to the predictive aspects of the model. Following hypotheses emerge from the proposed model for evaluating students in the elementary school.

(a) If evaluation is made an integral part of the teaching-learning process it serves as a quality control measure.

(b) If students are properly placed in instructional sequence, through diagnostic evaluation, it promotes better learning and provides specific basis for remediation.

(c) Formative evaluation enables the teacher to adapt his instruction in accordance with learning requirements of students.

(d) Regular and immediate feedback of results of summative evaluation improves students' achievement.

(e) If criterion-referenced tests are used in place of norm-referenced tests, it provides more reliable evidence about level of mastery of concepts and gaps in learning.

(f) Objective-based teaching and objective-based testing lead to improvement in students' achievement.

(g) If students are informed regularly about their adequacies in learning it reinforces learning and develop positive self-concept among students.

(h) If self-referenced, rather than class referenced approach is used in analysis of results it provides a better measure of students' growth and rate of progress.

(i) If an integrative assessment of all cognitive, affective and psychomotor learning outcomes is made it provides better basis for forming sound judgements and decision taking process.

## IX

### PREPARATION OF A POLICY STATEMENT

#### 9.1 Introduction

Elementary Education is a direct responsibility of the State Governments. This implies that qualitative improvement is also its responsibility. Examination reform is one of the important aspects of educational reconstruction in realising the educational goals. In fact, it is not examination alone but the whole system of evaluation which has to be consistent with the national objectives of education. The democratic set up of the Government based on adult franchise presupposes an enlightened and educated citizenry. To make it a reality, universalization of education is the only way. Elementary education, therefore, must play an important role in the transformation of our masses who are capable of reacting to any positive measure initiated for this regeneration. With the changed outlook on the role of various agencies engaged in the task of educational reformation, it is of utmost importance that the State Government take upon itself the task of introducing and implementing efficiently the educational policies and programmes consistent with the national aspirations.

#### 9.2 A Case for Action Plan on Evaluation

The quality of elementary education very much depends upon the system of evaluation which should conform to objectives of education at this stage. Today evaluation is regarded as a process of appraising pupils achievement in different fields of educational experience which includes both scholastic and the non-scholastic areas. The existence of certain pre-determined objectives of education is considered as pre-requisite for the purpose of evaluation. Modern theories of education demand a thorough search into the present practices of education. This requires well-designed and systematic introduction of new evaluation policies which provide evidence on



the efficient functioning of the process and the educational progress. An action plan contemplated for improving the quality of elementary education envisages the State Government to provide adequate and expert leadership through its educational agencies like the SCERT's SIE's, S.I.S.Es and Departments of Education. The involvement of teachers' associations, parents, public workers as well as the classroom teachers, is very essential in evolving an action plan. This is a simple strategy that involvement of those who later on have to implement the reform, is necessary.

### 9.3 The need assessment

The first logical step in developing an action plan for improving evaluation at the elementary stage is to get acquainted with the existing practices. For this an appraisal of the prevailing practices at a given stage is basic to identify its assets and liabilities. This type of study must include evidences relating to the pattern of examination promotion policies, teachers' attitudes, pupils' interests, aspirations of parents, tools and techniques being used, place of internal assessments and its effectiveness, if any, practice of diagnosis and remedial work, incidence and degrees of wastage and stagnation, maintenance of records, pupil teacher relationships, quality of evaluative devices, comprehensiveness of system of evaluation and such other relative information will go a long way in helping the planners who appreciate the context in which the new programme is going to be launched. Besides, such a status study would provide the needed data to project more realistically the inputs required.

### 9.4 Task identification

To start with a working group consisting of curriculum experts, evaluation experts, elementary school teachers, elementary teacher-educators and SIE's personnel may be formed to plan a line of action which details out the procedure to be adopted for appraisal of existing practices. The proposed working group may undertake to sample survey or on the spot study in one or two districts of the state with the help of a simple questionnaire and an interview schedule. Based on the data obtained, the questionnaire may be recast and used in all the districts to collect the required information. To

hasten the process district-wise small group may be formed for the purpose. The persons involved in this task may be adequately oriented to accomplish the given task. This survey should ordinarily be completed in the period of two to three months.

The overall picture that emerges after the compilation and analysis of data should enable educational administration to understand the shortcomings in the prevailing practices of evaluation, the genuine problems of teachers in the field, the resources available, the general reaction, attitudes and aspirations of the people of the community. Besides focussing the attention on the different tasks that have to be accomplished, the existing position would reflect the need for improvement in the development of instructional and evaluation material, motivating teachers, orienting them, delineating the role of instructing officers in understanding and promoting new evaluation policies and practices. In short the position study report should be ready before taking stock of the resources to be employed in implementing the plan of action.

### 9.5 Availability of Resources

Introduction of any plan of improvement depends upon the resources that are readily available and the resources that may be mobilized. The resources include both men and materials. The main resource to be mobilized is the class-room teacher who needs to be properly motivated and convinced of the proposed plan of action. Depending upon the resources available proper phasing can be done. Moreover, if sophisticated evaluation instruments are not available for use, some simplified teacher-made evaluation tools can be developed by involving teachers and in cooperation with the experienced teachers and evaluation experts. It is in the light of the available resources that we can identify and set our objectives which in turn would form the basis for deciding about the strategy and the process of implementation.

### 9.6 Assumptions underlying policy statement

At the elementary stage the evaluation policy will be determined by the following assumptions:—

- (a) Education at the elementary stage is to be developmental



and growth oriented which promotes the development of concepts, abilities, habits, attitudes and values leading to the all round development of the child.

(b) Education will not only serve as a basis for preparing the child to the higher stages of education but also promote in child, such skills and competencies which enable him to discharge his duties more efficiently as a responsible member of the society since for a large and considerable section of the students this may be a terminal stage.

(c) Evaluation is to be considered an integral part of teaching and learning and, therefore, principles of formative - diagnostic evaluation have to be employed at this stage.

(d) It is assumed that a policy of non-detention and automatic promotion has to be adopted for solving the problem of universalisation of education. This would require the children to grow at their own pace which in turn would necessitate a system of developmental teaching and individualised instruction in schools.

### **9.7 Advisory Committee for implementation**

A high level Programme Advisory Committee has to be set up in each State if there is none at present. Such a Committee may have State Education Minister as its Chairman and the Director of SCERT/SIE as the Member Secretary. The other members would be represented by an administrator, curriculum expert, evaluation expert, elementary teacher educator, parents and the eminent educationists. The main purpose of this high level committee would be to advise in planning and implementation of the improved plan. At the District level another committee may be constituted with District Education Officer as the Chairman and may be represented by the Block Education Officer Teachers, Head-masters, Jr. Teacher Educator and Evaluation specialist from the State Institute of Education or from Teacher's Training Institutions.

The high level Body will determine the policy of evaluation and prepare a scheme of evaluation while the District level Committee will ensure the operation of the scheme in the field.

For effective implementation at the school level the system of decentralised and intensive supervision has to be evolved by the State Departments of Education. This is necessary because in the final stages teachers need a lot of guidance in the application of new



evaluation procedures, maintenance of records and interpretation and use of test results. Since most of the States have accepted the policy of automatic promotion and this allows the children to progress and grow at their own pace evaluation has to be an integral part of the teaching learning process. To ensure this the members of the District level Committee have to provide leadership, effective supervision and guidance.

The Programme Advisory Committee will be responsible for the development and issue of policy statement, appointing and constituting the working group for the appraisal of the present position, review of evaluation practices from time to time and such of the responsibilities that may be assigned from time to time. The District Committees will be responsible for effective implementation of the policies evolved by the high level committee.

### 9.8 Policy Statement

As pointed out earlier evaluation is to be considered an inseparable part of the teaching-learning process and it has to be delinked from the annual examinations. It is necessary that the State Government should enunciate its policy on evaluation in unambiguous terms with sufficient clarity. Such statement should cover the following aspects:

(a) Theoretical framework fixing the role of evaluation in elementary education particularly in the context of non-detention policy and automatic promotion as a strategy of universalisation.

(b) Scheme of evaluation indicating the testing programmes, the promotion policies, progress reporting, reporting procedures etc.

(c) Mode of supervision of the programmes and procedures of evaluation which among others should include on the spot guidance of the teachers.

(d) Methodology of orientation of inservice and pre-service teachers in development of instructional and evaluation materials.

(e) Role of different agencies for the preparation and revision of instructional and evaluation materials besides undertaking pilot studies for experimentation.

(f) The modern concept of evaluation and its role for improving student's learning may be emphasised. The need for integrating evaluation with teaching and using evaluation for improving teaching learning process need be highlighted.

(g) The idea of various types of evaluation tools may be given but



the role of teacher-made-tests and observational techniques of evaluation should be highlighted in the scheme of evaluation to indicate the need for continuous evaluation for diagnosis and feedback.

(h) The distinction must be made clear that evaluation at the elementary stage is development oriented or growth oriented. Comprehensive evaluation aims at improvement of both teaching and learning rather than serving as a process of grading or certifying students as envisaged at present at the secondary stage. The focus of evaluation at this stage is on development and assessment of such abilities, habits, interests and values which contribute towards the total development of the personality of the child so that he eventually becomes effective citizen and agent of change. Since development is a continuous process, evaluation has also to be continuous in order to see how growth is taking place at different levels and at different times. Therefore, the need for continuous and comprehensive evaluation at this stage should be highlighted.

### 9.9 Delimitation of Operational Area

(a) The State Level Programme Advisory Committee will also decide the area of operation. Depending upon the resources, both technical and financial, various strategies can be adopted in implementation. Whether the improved plan has to be implemented on a selective basis limited to a district or a group of schools or on a state basis has to be decided and indicated in the policy statement. What areas, classes and subjects are to be taken first also be indicated. We may like to take curricular subjects in the first instant and gradually extend to the rest of the areas of growth in the light of the experience gained. Alternatively all subject fields and cocurricular activities may be taken up for the purpose of evaluation beginning with class I and gradually extending to class II upward. Adoption of a particular strategy in preference to the other depends on available resources and the readiness of the teacher. Since continuous evaluation is a forgone conclusion of the new scheme of improvement, the programme Advisory Committee may set up a technical group to evolve an efficient system of recording pupils' progress and reporting it to the users for ascertaining the functionality of the record-cards. This may be done by a trial process beginning with one class and then using it for other classes by continual improvement of the

record cards. The State Evaluation Unit may conduct experiment for evolving a suitable report card.

The policy statement, therefore, reflects not only a frame of reference within which various programmes have to operate but in addition highlights the priorities of the State, the mode of planning and implementation of the action plan and the likely benefits that are going to accrue. Moreover some constraints of time financial resources and resistance with field may have implications for putting the plan into operation. The most crucial aspect of implementation is the selection of the right strategy and its related logistics. This aspect is discussed in the next chapter.



## CHAPTER-X

### STRATEGY FOR IMPLEMENTATION

Having discussed the planning aspect of the action plan we should now address ourselves to the task of working out a strategy for implementation of the programme we visualise. The proposed evaluation plan will not only improve the quality of education in our elementary schools but will also minimise wastage and stagnation. Whatever strategy is adopted it should be realistic and at the same time it must yield early dividends by preventing unnecessary delays in the coverage of all the schools in the state. We, therefore, realised the urgency of this programme which, it is expected, will be given top priority by all the agencies; Directorate of Education, S.I.Es, S.I.S.Es, S.C.E.R.Ts and other inservice agencies besides the supervisors of elementary schools and the teachers involved in the programme.

#### 10.1 Establishment of a Committee

We suggest that the first step in the implementation of the programme should be the establishment of a high level committee in each State or Union Territory as indicated in the last Chapter. This Committee should be responsible for successful implementation and for periodic evaluation besides providing needed administrative and academic direction. It is expected that this Committee will transform itself into a functional committee and it should meet at least once a year and if possible more than once.

No programme can be worthwhile unless it has adequate financial support. It is suggested that sufficient funds should be earmarked in the Education Department of the State specifically for the reform in examinations. It should be ensured that funds so earmarked are not reappropriated for any other purpose whatsoever. It is hoped that the State Boards of School Education will also set apart some funds for this purpose because in many cases it is the statutory func-

tion of the Boards to involve themselves in school improvement programme.

### 10.2 Vitalising the Pre-service and In-service Education of teachers

(a) The first step for improving evaluation at the elementary stage will be the training of teachers both at the pre-service and inservice level. In respect of the pre-service education of teachers it is suggested that the concept of evaluation be made part of the syllabus of the teachers training courses at the Jr. teacher's training and at the B.Ed. levels. This is necessary because the Jr. teachers institutions provide teachers for the elementary schools and the persons with B.Ed. degrees later act as supervisors. There may be even a separate paper in evaluation a part of which may be devoted to improvement of evaluation practices in the elementary schools so that it becomes an integral part of the teaching learning process. Provision for methodology of curriculum renewal should also be made in the light of improved evaluation programmes.

(b) The inservice education of elementary teachers because of the magnitude of numbers has to be undertaken in a phased manner. In view of the emphasis on improvement of learning rather than on measurement of learning the task involved would make a sizeable provision for diagnosis-remediation courses. The training course for pre-service and inservice teachers should cover construction of evaluation tools and techniques, maintenance of records, analysis and use of results. The duration of such inservice courses should not be less than ten days and practical work in the construction of teacher made tools should be the important part of this. The scheme for such courses may possibly be drawn up by the NCERT which may associate with it the representatives of the SIE/SCERT/SEUs etc. The State Institutes of Education should have a Research Cell devoted exclusively to the problems of elementary education and area of evaluation may be taken care of by this cell.

### 10.3 Strengthening of Supervisory Service

Simultaneously with the training of teachers or even prior to that the training of supervisors of elementary school should be taken in hand. It is really a sad commentary that the supervisors in general devote themselves exclusively to the administrative work.



No quality improvement in education is possible unless the supervisors actively involve themselves in school improvement of which evaluation is an important facet. They should be able to provide the necessary guidance to the practicing teachers and even take classes during their visits to provide the needed demonstration to the teachers.

It should be one of the incidental functions of supervisors that he should be a link between the school under his charge and the community of which the school is a part. In case the supervisor is a member of the Panchayat he should carry the message of the quality improvement programme to the representatives of the people. In order to make it compulsory for the supervisors to involve themselves in this evaluation programme the authorities writing the confidential reports of the supervisors should make a definite mention of his work that the concerned supervisor does in the field of evaluation. The duration of the training programme of the supervisor should also be of ten days. This training should be undertaken by the N.C.E.R.T. However, if for financial constraints it becomes impossible then the State Institute of Education and their counter parts in the state may be entrusted with this task and the NCERT may provide at least resource persons for these training courses.

#### **10.4 Development of Materials**

Apart from orientation of the personnel another important step is the development of instructional and evaluation material for use of the teachers. Even for orientation of personnel some special material may have to be prepared before the organisation of such courses. Such materials may be, conceptual, illustrative or model. Teachers handbook on evaluation, learning units, unit tests, observation schedule, diagnostic tests, remedial exercises and recording proforma are some of the materials which need immediate attention. The teachers handbook appears to be the first publication which should be in the hands of the teachers. It should explain the basic rationale of the new evaluation programmes and the corresponding impact which is expected as a sequel to the introduction of the new plan of action. Guidelines for developing and using various types of tools and techniques, especially in the affective domain, and illustrative material should form a part of such a handbook besides of course some resources of learning. How to construct



the tools? How to frame various types of questions? How to administer and score the tests? How to analyse and interpret the results? How to maintain records? How to feedback the results for improving the teaching learning process? These are some of the important ingredients which should form part of such a handbook.

The best agency for producing the model handbook for improving evaluation at the elementary stage is the NCERT. Since model handbook may be adopted or adapted with necessary changes by different states keeping in view their needs they are to be either translated or developed in original languages for use in different States. State Institutes of Education or their counterparts may undertake the responsibility of adapting or translating the handbook. The language of the handbook should avoid as far as possible the technical terms and be made as simple as possible so as to give an average elementary school teacher an insight into the programme of implementation. The main responsibility to accomplish this task is that of the State Institutes of Education and its counterpart in the State. The NCERT should however, supply some guidelines for that. Material development will be a continuous process and its revision in the light of the experiences will be a continuous process and its revision in the light of the experiences will be an ongoing process.

### 10.5 Time targeting and time tabling

Any good plan will have a systematic projection of time targets and time tabling of the various types of programmes and activities to be undertaken. This task should be done very carefully in a realistic manner keeping in view the financial resource and the technical know-how available. A tentative plan is suggested below:

(a) The implementation period should if possible tally with the overall five year plan of education as envisaged in the state. It would be better if it could be made co-terminus with the sixth five year plan. Nevertheless, in view of the concept of the rolling plan it does not matter much if the chronological beginning of the evaluation plan does not coincide with the beginning and the end of the sixth five year plan.

(b) The training of the key personnel which include the concerned persons from the State Institute of Education and the Teachers Training Institutes Heads of Schools or other suitable persons etc.,



should take place in the first year. These key persons should act later on as resource persons for further training of the teachers in different blocks. Simultaneously during the same year material preparation should also be under-taken and completed. This material be supplied to the teachers of elementary schools well in advance before the introduction of reform.

(c) When the necessary tools and techniques are ready, a plan for five-year try-out may be developed. In the following year the pilot project may be launched in one school from each block of the State or the Union Territory. In this pilot project all such teachers from the area under operation, who were involved in the try-out. The Heads of the Institutions who are to coordinate the activities and provide the necessary facilities to implement the programme must be involved in planning. Supervisors should provide on-the-spot guidance for affective implementation.

(d) The main purpose of the pilot try-out is to validate the plan of action and identify the strengths and weaknesses of the strategy used for implementation of the action plan. Therefore, provision for inbuilt evaluation must be made right in the beginning while launching the programme in the field. The plan of action as well as the instructional and evaluation materials prepared could be modified in the light of the actual implementation and the difficulties and the bottle necks encountered therein.

The remaining elementary schools including the new ones which will be opened as a part of the five year plan and development, should be brought in within the ambit of this programme in the subsequent three year according to a phased plan depending upon the facility and resources available and the training of the personnel concerned. Strategy of implementation will be determined in the light of the experience gained in the pilot project, but before launching the reform on a State-wise basis proper publicity must be given to the programme and certain safeguards be adopted as discussed in the chapter that follows.

## DIFFUSION AND DISSEMINATION

After the plan of action is tried out on a pilot basis and necessary modification affected thereafter, the next step is to introduce the reform on a mass scale. This may cover the entire state or a part of it depending upon the size of the State and its resources. The process of diffusion and dissemination of reform has to be undertaken with due care after making the necessary preparations besides keeping in view the constraints in terms of money, time and technical know how available. This phase involve production of material, its distribution, orientation of personnel, mode of introducing the reform and monitoring and evaluation of the programme.

### 11.1 Production of material

The immediate need in the process of dissemination is the development of publicity material through which necessary information to users and practitioners of reform could be given. This is also essential for creating proper climate for the introduction of reform. The proposed material should help the teachers and the community to know the shortcomings of the existing evaluation practices besides enabling them to appreciate the need for improvement of the existing system of examination. The publicity material should be produced in simple language by avoiding the use of technical terms as far as possible.

Besides the publicity material the other materials which have to be kept in readiness is the relevant conceptual and sample illustrative material. The conceptual material should aim at acquainting the teachers and personnel to be involved with the concept, techniques and approach to evaluation at the elementary stage. Simple illustrative material like the unit tests, diagnostic tests, readiness tests, question papers, recording proforma etc., have to be developed in advance for providing necessary guidance to the users



of the material. Both the type of materials, the conceptual as well as the illustrative, should form a part of the hand-book on evaluation proposed earlier. The conceptual material developed centrally by the NCERT may be translated into Hindi and other regional languages for distribution in different States.

### **11.2 Creation of Favourable Climate**

Alongwith the development of materials, necessary steps are to be taken to create a favourable climate to implement the reform. This can be done by seeking cooperation of the teachers, parents, community and the teacher associations. Students and the teachers should be made aware of the usefulness of the proposed reform. Resistance, if any, from the teachers or the community may be overcome by explaining to them the significance of the reform anticipated. This can be ensured through publicity media like radio and television, holding conferences and teachers and heads of the institutions, publishing articles on evaluation in the N.C.E.R.T. journal "The Primary Teachers" or other journals of the State Institutes of Education. A special issue of the journal "Primary Shikshak" published by the NCERT may be devoted to evaluation at the elementary stage. All possible efforts should be made to convince the teachers and motivate them to undertake the reform.

### **11.3 Distribution of Materials**

The conceptual and the sample material thus produced must reach the teacher in each block through the Block Education Officers or other authorities who are in direct contact with the elementary schools. A conference of such officers may be organised at the block level and the teachers of the experimental schools may be asked to participate. These meets may be utilised to distribute the material and for explaining them about the mode of its utilisation.

If the material is distributed through Block Education Officers to the various schools then the comments or reactions of teachers can be invited to ensure that the material has reached the users and is read. In order to make the Block Education Officers more effective in operationalisation of the scheme some guidelines for use of Block Education Officers may be developed for efficient supervision and coordination of the programme activities.



### 11.4 Orientation of the Personnel

Once favourable climate for introduction of reform is created and the needed materials are distributed, the next step would be to develop confidence in the teachers and other personnel to implement the reform. This means training of all those who are directly connected with the programme implementation. This is also essential for enabling the teachers and other users to appreciate the improvement programme and use the material efficiently. Separate orientation seminars, workshops and conferences may be organised for various types of personnel. In order to economise, some sort of phasing of orientation programme may be done. Block Education Officers, Jr. Teacher Educators and selected staff of the State Institute of Education and other local educational agencies may be given intensive training in the first instance so that their services could be utilised later on as resource persons to orient the primary teachers.

Duration of such orientation courses for teachers should be of ten-day duration. Emphasis in such orientation workshops should be on the actual practice of the items and improvement by the teachers. Cooperation of local agencies may be sought in undertaking such orientation programmes.

As a follow up of these orientation courses it is recommended that study circles be organised by the Inspecting staff to ensure further cooperation of the parents, teachers and the local communities. Advantage may be taken of such meetings to remove misgivings if any by providing them on-the-spot guidance. Such type of courses are held to instill faith and confidence in undertaking the reform contemplated. In addition, the teachers will be now ready to implement the reform with a zeal and interest.

### 11.5 Mode of Introducing the Reform

The stage is now set for introducing the reform on a mass scale. A notification may be issued by the Government or the Education Department or by the State Institutes of Education to the effect that the reform will be introduced from such and such year and from such and such date. This notification must mention in clear terms the purpose of introducing the reform and the likely benefits that are going to accrue from this. What would be the role of



the supervisory and inspecting staff in the effective implementation of the proposed reform should be properly delineated.

Meetings of the heads of such schools where reform is to be introduced by organised at the Block Level and the contents of the notification be read out to them followed by discussion about the mode of implementation of reform. How to maintain evaluation records, analyse them and use them for taking decisions may also be taken up in these meetings. A clear statement of the targets of achievements and time tabling of the various types of activities will go a long way in making the reform successful.

### 11.6 Monitoring and Evaluation

When the reform is being introduced, the time targets and achievement goals have been fixed up. It is essential that the working of the project be appraised from time to time. This requires a constant watch on the various types of activities going on at different times and in a coordinated manner. To monitor the various activities a specialist from the State Institute of Education or from the Teacher Training Institutions may be appointed. The specialist is not only to monitor the project but also gather information from time to time to judge the efficiency of the process as well as the enroute products of the programme.

Supervision work may be entrusted to the Block Education Officers who must keep a regular record in their diaries of the significant shortcoming of the project as also its strengths. Hurdles, if any, may be referred back by the Block Education Officers to the Monitor who is directing the operations in a particular area.

Apart from class-room supervision the opinion of teachers, students and parents may also be sought about the progress of the project. On the basis of these reports the needed modification may be done in the process of implementation. The need for such a continuous assessment of the process of operation as well as its end products cannot be overemphasised from the point of view of using evaluation as feedback.

In this connection the leadership role of State Institutes of Education can be visualised in the form of providing direction and guidance to all those who are engaged in the practice of reform. Any problem arising out of the implementation has to be investigated by the State Institutes of Education and the results be communicated

to the persons monitoring the programme. All such activities relate to the progress evaluation and programme modifications so that the reform can be defused in a planned and systematic manner. To what extent the efforts made have been successful can be known only by evaluation experts who could examine the efficiency of the process as well as effectiveness of the process. The summative evaluation is, therefore, the next logical step which follows the implementation of reform on a mass scale.



## SUMMATIVE EVALUATION

### 12.1 Basic Decision

Just like end-of-the-course activity summative evaluation is end-of-the-project activity which is concerned with the programme certification, programme modification or programme termination. Its main purpose is to judge the programme outcomes in terms of programme intents. Since every project is borne in a particular context with certain assets and liabilities attached to it, its evaluation has to be done in terms of its own objectives, resources and inputs. As such summative evaluation of any programme may be done in terms of its context, its inputs, its process, its product and its impact. Each of these types of evaluation must reflect judgement in terms of accountability i.e. how far the money spent on evaluation programme was justified. While evaluating the above mentioned aspects an evaluator must ask the following questions to himself.

- (a) What is to be evaluated?
- (b) When is the summative evaluation to be done?
- (c) Who is to do the evaluation?
- (d) How should it be done?
- (e) How should the judgements be formed and decisions made?

We may take each of these aspects one by one.

### 12.2 What is to be evaluated?

Optimum utilisation of the resources, the financial as well as the manpower is basic to any programme of evaluation. We may think in terms of the process which refers to the efficiency of the strategy used, mode of orientation of personnel, the strategy of development of materials and technique of formative evaluation used

Similarly we may think of evaluating the end products of the programme which may include improvement in student's learning, improvement in instructional efficiency, quality of material produced and used during this programme.

### 12.3 When should we evaluate ?

With regard to the second question relating to the timing of summative evaluation we may use two approaches. One, summative evaluation can be undertaken at the end of each phase of the programme. This prevents some of the pitfalls that might arise at a later phase due to certain inadequacies at the proceeding stage. However, this needs prompt and time bound evaluation and its report must be available for use before stepping on to the phase that follows. Two; summative evaluation can be done at the end of the project itself when the focus is mainly on judging the effectiveness of the programme intents. Main limitations of this approach is that care is not taken of the weaknesses which might influence the end product later on.

### 12.4 Who should evaluate ?

The third question deals with the appointment of the evaluators. If, summative evaluation is undertaken at each phase of the programme, preference may be given to those who are involved in the development and implementation of the programme. This, does not however exclude the role of the external evaluators. When summative evaluation is to be done after the completion of the project, preference must be given to the external evaluator who is not committed to the programme. This, however, does not exclude the possibility of associating some of the developers in the staff. It may perhaps be better to have a team of three evaluators out of whom atleast one must be an uncommitted technical evaluation expert and one who has been engaged in the task of formative evaluation at different stages of the project.

### 12.5 How should we evaluate ?

The fourth question concerns process evaluation. This requires assessment of strategies, tools, orientation programme, mode of



preparing and distribution of materials, method of formative evaluation etc. For this a team of evaluators can start working from the very beginning instead of waiting for the project to be completed. This team should invariably include a developer of the project, but efforts should be made to get opinion and reactions of all those people who influence or get influenced by the project. This opinion of the people who use, supervise or guide the programme should be considered more significant than the tools and techniques they use. Well planned discussion with such a team from time to time is good enough to identify the strengths and weaknesses of the process.

It may be pointed out that by and large summative evaluation is to be a cooperative venture. As far as possible the statistical approach should be eschewed in lieu of simplicity, economy and functionality of the programme.

Apart from the approach to evaluation the fourth question also deals with the techniques of evaluation. Since evaluation is not limited only to pupil's growth but also relates to teacher's growth and the efficiency of the teaching learning process, a variety of tools and techniques have to be used as given below:

### 12.5.1 Tools and Techniques

#### *a. Analyses of student's scores:*

Students scores on various types of tests, written, oral or performance can be collected from the experimental schools and analysed in terms of instructional objectives.

#### *b. Students' Reactions:*

Since students must have been exposed to various types of techniques, it is desirable if their reactions about the use of new techniques of evaluation are quoted and analysed.

#### *c. Students' Interview:*

Random sample of students participating in the programme can be taken and interviewed. Such interviews can be rediotaped, if possible for future reference. Such interviews should help to know the strengths and weaknesses of the programme.

#### *d. Teachers Reactions:*

To ascertain the reactions of teachers to the new evaluation pro-

gramme, teachers' reaction sheet can be used. Their reactions may be analysed to get an idea about the effectiveness of the various tools and techniques employed.

*e. Teachers Interviews:*

Likewise a random sample of students and teachers participating in the evaluation programme can also be taken they may be interviewed regarding the effectiveness of the new programme. Analyses of their reactions may be used for forming judgement on the effectiveness of the programme.

*f. Opinion of Supervisors:*

With the help of rating scale and check-list the opinion of the Block Education Officers and other inspecting staff can be gathered and analysed. Such tools should include measurement of students' growth, teachers' growth, instructional efficiency and other collateral effects.

*g. Parents' Reactions:*

Since evaluation at the elementary stage includes assessment of non-scholastic traits like those of emotional stability, aggressiveness, cooperativeness, social attitudes, health habits etc., it is very essential that opinion of parents must be sought because they are more intimately observing their wards at home. Their opinion or reactions can be sought by means of an opinion or reaction sheet by mail or by holding interviews with them at the parents-teachers meet.

*h. Omnibus meeting:*

Whenever there is some practical difficulty of employing the above mentioned techniques the simpler alternative is that a meeting of the representatives of all those categories of personnel who are involved in one way or the other in the project may be held. In this meeting a consensus may be arrived at and judgement regarding effectiveness of the programme be made.

## 12.6 How to form judgements :

The last question pertains to the judgement making process. This phase is very significant from the point of view of adopting, adapting or terminating the project. It is, therefore, desired



that attempt should be made for appraisal of all the factors having bearing on the programme. The gap between the intended and the actual outcomes may be sometimes more apparent than real if we do not account for the constraints, limitations, the resistances, the inputs, strategies, processes and the collateral effects. It is, therefore, desirable that context evaluation, input evaluation, process evaluation, product evaluation and impact evaluation should all find a place in the total programme of summative evaluation.

On the basis of the findings of the summative evaluation the evaluators should not only recommend the adoption, termination or adaptation of the project but they should also provide a description of the strengths and weaknesses of the programme on the basis of which judgements have been formed. Justification for each decision made by the evaluators must find place in reporting.

### **12.7 Need for follow up**

A comparative survey or sample study may be taken up as a part of summative evaluation in some of the schools to see the impact of the programme. This might serve as a motivational factor for those who are involved in the project. A case study of one or two schools may also be undertaken at the pilot stage in order to appreciate the difference between the practices that existed prior to the project and those which are established as outcomes of the project.

If the project is not terminated and is to be continued then it must be followed up in the light of the findings of the summative evaluation.

### XIII

## FOLLOW UP AND RENEWAL

With the summative evaluation the project is considered to be complete. However it should not end here as it provides useful data for follow-up work besides using it for renewal of the project.

### 13.1 Context evaluation

The data from context evaluation should be used to identify the variables that condition the effectiveness of the programme. The relationship of the various factors with the programme effects can be identified. The data are of greater concern to the Head of the Institutions as also to the Department of Education. Administration of the school or of the state can take necessary steps to make up some of the deficiencies which are highlighted in the summative report. Weaknesses with regard to the optimum utilisation of the facilities can be further investigated by the staff of the SIE. Grant for such experimental projects can be ensured at the level of the NCERT and the State Institute of Education. Lack of cooperation of the community if observed in the report, should be ensured in future by involving leading community members, parent-teacher associations etc., at the time of planning.

### 13.2 Input evaluation

As a follow-up action a number of steps can be taken up with respect to materials, tools, techniques, personnel, and administration. In the light of the observations, some tools and techniques may have to be simplified. This can be done through further trials or by teachers themselves when additional tools are not available. They are to be procured from different sources like the N.C.E.R.T., S.I.Es and commercial agencies. It is always better to get the tools prepared by the teachers themselves under the guidance of experts from the SIEs or Teacher Training Institutions.



In case it is found that the teachers are not adequately oriented or motivated for effective participation in the programme, the local education authorities in cooperation with the State Institutes of Education and Departments of Education may organise short in-service orientation courses for the existing teachers. Some incentives may be given to enthusiastic teachers by the education department. Keeping in view the financial burden for in-service training courses, it is recommended that the courses of studies of the pre-service teachers may be revised to incorporate the concept and techniques of evaluation so that the product of these institutions is well conversant with the new evaluation practices.

Evaluation report may reflect lack of pre-requisite skills and abilities among the students at the time of project intervention. In such cases a preparatory programme may be taken up by the teachers under the guidance of local education authority. For pupils of higher classes like VI, VII and VIII, some sort of self-learning preparatory material may be used. Such material may be prepared by the SIEs, Training Institutions and University Departments of Education.

If it is found that the programme evaluators have some administrative difficulties local education authorities may be approached for necessary guidance and direction.

### 13.3 Process evaluation

While considering data from process evaluation, certain follow-up activities may be taken up with regard to teaching-learning material and the strategy used. There may be the need for reorganising the learning units in a different sequence to facilitate the teachers as well as the students to derive the maximum benefit. Likewise the test material and the ancillary instructional material may have to be improved or even produced anew by the State Institutes of Education in collaboration with Teachers' Training Institutions and the teachers. Workshops in the same may have to be organized in collaboration with local educational agencies. The N.C.E.R.T. may, however, evolve some sample evaluation material for the assistance of these agencies.

For improvement of teaching methods and mode of implementing the programme, teachers themselves may try to find out the alternative methods. The need for Teacher's Guide and illustrative



material cannot be undermined. University Departments of Education and the Teachers' Colleges may introduce the methodology of action research in their courses. Organisation of short-term training courses by the N.C.E.R.T. and the S.I.Es. is a fore-gone conclusion.

### 13.4 Product evaluation

In product evaluation it may be found that a particular group completes the task much ahead of time in comparison to the other. In such cases some sort of enrichment material need be provided to the brighter group and remedial materials to the other group. The programme of enrichment and remediation may be carried out in different ways. The teacher can find the areas of non-learning of a small group and allocate some units to above average students of the group in order to help the weaker groups to bring them to the average level. The second strategy may be the identification of erring students after test administration and scoring. More attention is paid to the remedial work to bring them to the average level. S.I.E's, S.E.U's and the Teaching Training Institutes may have to develop such enrichment or remediation materials for the use of teachers. The third strategy requires that some teachers from the in-service training courses may be used to prepare such material in the form of programmed texts which may be used by the students.

### 13.5 Impact evaluation

Follow-up of the evidence that accrues from an impact evaluation can be done in terms of intended or unintended evidences. This evidence may relate to students, teachers, community or administration. The data may reveal some collateral effects, in the form of positive or negative attitudes. Students may find the programme uninteresting or tiresome. In such a case the causes of such an impact may have to be looked into. Ways and means have to be found out to motivate students to accept the programme favourably. Elaborate system of record-keeping might be the reason for teacher's unfavourable attitudes to the programme. To remedy this more simplified system has to be evolved to make it more realistic and functional.

Apathy of administrators may be due to additional administrative



and registration work which becomes a burden to the local authorities. As a follow-up of the evaluation reports, the positive impact has to be reinforced while the negative impact has to be investigated further for its causes and remedies.

The community itself may not readily accept the major changes in the traditional practices. The resistance on the part of community must be overcome by making the members of the community understand the likely benefits of the proposed innovative practices in evaluation. The objective of the programme must be clearly projected to the parents, communities, parent-teacher associations, teacher's associations etc. through discussion and necessary publicity. This would make the programme more acceptable. Publicity materials may be prepared by State Institute of Education and State Department of publicity may be moved to take-up a programme towards this end.

### 13.6 Accountability

Accountability is another aspect which needs attention of the project evaluators and the administrators. Although, it is very difficult to account for the qualitative and products, in terms of the objectives of the reform, something should be done to see the extent to which the money spent on the project is in commensurate with the project's dividends. In the light of the evaluative data, certain changes in the strategy of reform may be made so as to make the whole project more economical.

Follow-up work, therefore, includes conduct of certain research studies based on empirical evidences, supply of supplementary literature, identification of strengths and weaknesses of the programme, reorientation of personnel and feedback of results to the teachers from the concerned institutions. State Institutes of Education and Teachers' Colleges may be asked to undertake to evaluation research and extension and training work in the light of data of summative reports.

### 13.7 Renewal of the Action Plan

This is the last phase of improving the *action plan*. *Renewal* may be of both the ends and the means based on the summative reports and as a result of the follow-up studies. The original plan

of action may be redesigned. The development of the new plan of action envisages the review of the process as well as the end-products. The purpose is to make the plan more functional, economical and practical. Renewal is done in terms of planning, implementation, extension and evaluation of the project. Likewise renewal envisages the recasting of the programme objectives, the programme content, the programme methodology and the programme evaluation. When the programme is to continue, the renewal plan of action may be developed with the help of an expert committee consisting of personnel involved at the time of planning the project. The ultimate objective is to come out with an improved version of the plan of action on the basis of empirical evidences collected through the actual try-out of the plan on a large scale. As the State Institute of Education is responsible for the academic guidance to the educational authorities at the local and the state level, it is desirable to have a separate evaluation cell as an integral part of the State Institute of Education. The renewal is therefore, a continuous process of appraising both ends and means or the products as well as the process by adjusting the ends and the means through regular feed-back of the evaluation data.



## DEVELOPING A PLAN OF ACTION

### 14.1 Level of development

An evaluation plan can be developed at any of the following levels:

- (a) Unit-wise plan for evaluation
- (b) Term-wise/quarterly plan for evaluation
- (c) Yearly plan of evaluation
- (d) Stagewise plan (elementary/secondary) of evaluation
- (e) Classwise (I-V/VI—VIII) or (I-II/III-V/VI—VIII) plan of evaluation.

For the purpose of this document it is proposed to develop an over-all school plan at the elementary stage. Before starting the work it is to be decided in advance regarding the nature and magnitude of changes that we are likely to introduce as a part of the improvement project. This would depend on taking certain decisions at the higher level by those who are concerned with the implementation of reform in the light of existing position, resources available and the needs of the field. Decision may be taken to introduce such changes that keep the internal balance of the school setting. For example development of learning units for primary classes and use of diagnostic tests in the classroom can be taken up. Second type of decisions relate to well planned incremental doses of improvements phased over a period of time. Plan of improvement may be long ranged but it does not involve large scale Government efforts as we see in projects like those of crash programmes. The third type of decisions refer to the major innovations aimed at solving significant problems. Such programmes involved large-scale Government efforts and money. For example curriculum renewal project, development of instructional materials like those of textbook production in all subjects for all the classes and the Rajasthan Plan of Examination Reform (1964-65) can be categorised under this head.

Another type of decisions which involve activities that require complete over-haul of the existing setting and are generally utopian in nature. For example abolishing of the external examinations forthwith at all stages of education is one such metamorphic decision.

Such a fundamental decision is basic to launching of any programme of reform. Programme development depends on such decisions taken in advance. More often than not, the reforms are introduced in a phased manner keeping in view the technical resources of the state. Therefore, by and large most of the projects belong to the second category of decisions sometimes called the incremental decisions.

## 14.2 Phases of Programme Development

### *a. Need Assessment*

While developing a programme of reform at the elementary stage, the first requisite is to determine the needs of the area. This requires some sort of appraisal of the context in which the proposed reform programme is going to be launched. Towards this end a study of the existing practices of evaluation in school is the immediate need. In the light of desired outcomes the difference between what is desired and what is already there would determine the educational needs which in turn determine the educational goal. The need of assessment activity can be undertaken by using tools like questionnaires, interview, analysis of documents, statistical data etc. The main focus of this sort of contextual evaluation is the selection of the most relevant problem.

### *b. Programme Planning*

At this stage listing of project objectives is the foremost activity. This has to be done keeping in view the available financial resources. This also requires forming judgements about the competence and availability of man power resources. What information is to be produced? Who will be the users? What type of information is needed? When and how is it to be gathered? Personnel to be included, scheduling of activities, budgeting the programme, sequencing and organisation of activities are other tasks which are to be accomplished at this stage. All these activities are focussed towards the selection of the programme and should



be carried out by involving those personnel who are to implement i.e. the users of the proposed innovations.

*c. Programme Implementation:*

When the programme has been properly visualised and selected the next stage is to implement. This stage can be divided into various action patterns. The limitation of the operational area, seeking cooperation of administrators teachers and educational agencies, development of needed materials, training of teachers pilot try out, if any, revising materials and strategies, preparing clientals through publicity, introducing reform on a mass scale, providing for inbuilt evaluation maintenance of systematic records, identify strengths and weaknesses in the strategy etc., are some of the appropriate tasks for implementation. The theme focussed is the modification and improvement of the programme.

*d. Programme Evaluation*

Programme evaluation takes the form of context evaluation, input evaluation, process evaluation (dealing with enroute products) product evaluation (which includes pupil evaluation, teacher's growth and materials produced) and the impact evaluation (which includes, intended out-comes, collateral effects on curriculum, textbooks, teaching and other programmes). All these aspects are the task areas for programme evaluation. Each of these aspects has to be judged in terms of accountability of the reform. The focuss at this stage is on certification of the programme or its adaptation.

*e. Programme Diffusion and Dissemination*

Once the programme proved effective it has to be diffused to a wider area after giving adequate publicity of the project results for the prospective users. This involves preparation of project report, training of personnel, development of conceptual materials and their distribution, modification and improvement of the design, introduct on of reform on a wider scale and summative evaluation of the project intents. The focus at this stage is on expansion of reform.

*f. Programme Follow-up and Renewal*

When the programme is diffused and disseminated on a mass scale summative evaluation is done. In the light of the report, follow-up work

has to be undertaken. This may require conduct of certain investigations, supply of supplementary literature, reorientation of personnel, feed-back of results to teachers and institutions. In the light of follow-up action and feedback from the teachers and institutions a final review of the process, strategies and the end products may be reviewed and necessary modifications may be affected in the original plan of action. On the basis of such an experience the renewed plan of action may be redeveloped by the expert committee which was associated at the beginning of the development plan.

The mechanics of developing an action plan is given in the annexure. It is hoped that this will serve as a basis for taking necessary steps for drawing out the action plan by the state agencies concerned with improvement of evaluation at the elementary stage.



## 14.3 MECHANICS OF ACTION PLAN

S. No.	Steps to be taken	Tasks to be accomplished
1	2	3
1.	Appraisal of existing position.	(a) Acquaintance with prevailing evaluation practices. (b) Assessment of needs (c) Identification of tasks to be undertaken. (d) Taking stock of resources
2.	Preparation of the policy statement.	(a) Development of a theoretical framework.
3.	Strategy to be adopted for implementation.	(a) Preservice education of teachers. (b) Inservice training of the teachers. (c) Role of different agencies. (d) Development of materials. (e) Mode and media of dissemination. (f) Training of supervisors. (g) Time targetting and time tabling of programme.
4.	Introduction of the reform contemplated on pilot basis.	(a) Actual introduction of the reforms in schools on pilot basis. (b) Supervision of plan of action in operation. (c) Providing for formative evaluation.

Mode of accomplishment	Resultant outcomes
4	5
1. (i) Appointment of a working group. (ii) Use of questionnaire and interview. (iii) Documentary analysis and discussion.	Position study report.
2. (i) High level committee of administrators, curriculum experts evaluators and teachers to work out the details.	Policy document on evaluation at the elementary stage.
3. (i) Through State Institute of Education/S.C.E.R.T. S.E.U./S.I.S.E.	Draft action plan ready for field try-out.
4. (i) Heads of Institutions to coordinate and provide necessary facilities. (ii) Inspecting officers to provide the needed guidance. (iii) Instructional interventions by teachers.	Supervisory reports about efficiency of operational strategy.  Modified version of plan of action, if need arises.



1	2	3
5. Diffusion and dissemination of reform on a mass scale.		<ul style="list-style-type: none"> <li>(a) Creating favourable climate.</li> <li>(b) Production and distribution of relevant literature on a wider-scale.</li> <li>(c) Mode of introducing reform.</li> <li>(d) Orientation of personnel.</li> <li>(e) Introduction of desired changes.</li> <li>(f) Monitoring and evaluation.</li> </ul>
6. Summative evaluation		<ul style="list-style-type: none"> <li>(a) Context evaluation.</li> <li>(b) Input evaluation.</li> <li>(c) Process evaluation.</li> <li>(d) Product evaluation.</li> <li>(e) Impact evaluation.</li> <li>(f) Accountability of reform.</li> </ul>
7. Follow-up action.		<ul style="list-style-type: none"> <li>(a) Conduct of research studies investigations relating to problems identified.</li> <li>(b) Supply of supplementary literature.</li> <li>(c) Identification of strengths and weaknesses of the programme.</li> <li>(d) Reorientation of personnel.</li> <li>(e) Feedback of results to teachers/institutions.</li> </ul>
8. Renewal of the action plan.		<ul style="list-style-type: none"> <li>(a) Review of the process and the end products.</li> <li>(b) Effecting modification in the existing plan of action.</li> <li>(c) Redevelopment of the renewed plan of action.</li> </ul>

4	5
<p>5. (i) Use of mass-media and other modes of publicity.</p> <p>(ii) Involvement of teachers and other experts.</p> <p>(iii) Holding of conferences, Seminars, Workshops.</p> <p>(iv) Phasing of the improvement programme.</p> <p>(v) Issue of notifications to schools and S.I.Es. for implementation of reform.</p>	<p>Impl. Institutionisation of reform.</p>
<p>6. (i) Appointment of external evaluation specialists.</p> <p>(ii) Associating programme developers and practitioners.</p>	<p>Project evaluation report.</p>
<p>7. (i) S.I.Es. and teachers' college of to undertake evaluation research, development, extension, and training work.</p>	<p>Suggestions for further improvement of the action plan.</p>
<p>8. (i) Expert committee as mentioned in Col. 4 against step No. 2.</p>	<p>Improved version of the action plan for reuse.</p>



#### 14.4 Action Points

##### *STEP—1: How to Plan ?*

The first step in the development of a new scheme for improving the procedures and practices of evaluation at the elementary stage in to create the necessary infra-structure for the appropriate planning and effective implementation of the measures. For this three types of committees are needed to be set up.

##### *A. Policy Planning Committee*

The main functions of this committee will be develop a policy statement on improvement of evaluation in elementary schools. Such a policy statement should highlight the :

- (a) need for the new scheme of reform.
- (b) objectives of the new scheme.
- (c) significant features or components of the scheme.
- (d) strategy to be adopted.
- (e) personnel to be involved.
- (f) mode of appraisal of programme outcomes.

This committee may be composed of Director of Education Dy. Director (Elementary Education); Director, SIE; Director S.I.S.E., a Senior Teacher Educator; a Principal, Junior Teacher Training Institution, a District Education Officer/Inspector of Schools; a Block Education Officer/Assistant District Inspector; a Headmaster Primary School and Primary teacher and one representative of the Examination Reform Unit of the N.C.E.R.T. besides the Financial Advisor. The Director of Education may be the Chairman of this committee and Dr. Director Elementary Education/school education as the Member Secretary.

##### *B. Programme Advisory Committee:*

The major functions of this Committee will be to advise the State Government in regard to the Programmes of improvement of evaluation procedures and practices in the elementary schools. The major job of this committee may be to

- (a) provide guidelines for implementation of the programmes.
- (b) develop the programme budget.
- (c) ensure financial allocations for implementation of programmes.
- (d) make assessment of programme outcomes.

This committee may be headed by the Director or Dy. Director



Elementary Education, while Director of the State Institute of Education/State Institute of Science Education may act as the Member-Secretary. Other members may be District Education Officer/Inspector of Schools, a Block Education Officer/Asstt. District Inspector, a Senior Teacher Educator, a Junior Teacher Educator, a Headmaster of a Primary Schools, a Primary teacher preferably from a rural school and a representative of the Examination Reform Unit of the N.C.E.R.T. besides the financial Advisor. This Committee should meet twice a year; once to develop the programmes and the second time for appraisal of the programmes.

### *C. Implementation Committee*

This Committee may be established at the district level to be headed by the District Education Officer who acts as the Chairman. Besides the District Education Officer, this Committee may include two block Education Officers, two Junior Teacher Educators, two Heads of Primary Schools, and three Primary Teachers; one Administrative officer of Account Officer besides the N.C.E.R.T. One of the BEO's Field Advisor of the region, or Jr. Teacher Educator, can act as Member Secretary.

The major function of this committee is to put the plan into operation in the elementary schools of the District. Such operations may consist of :

- (a) appraisal of the resources both financial and manpower.
- (b) assessment of resources both financial and manpower.
- (c) phasing programmes according to needs and resources.
- (d) fixing up priorities.
- (e) time-tabling of the reforms.
- (f) introduction of the reforms.
- (g) supervision of the operations.
- (h) formative and summative evaluation.
- (i) review and renewal of the programmes.

### *STEP—2 : How to Proceed*

1. The Chairman, Policy Planning Committee calls for the meeting to take decision about the reforms to be introduced.
2. A working group of about five persons is set up to prepare a white paper (A phased programme) on improvement and reform in evaluation system at the elementary stage.
3. The white paper is put up before the Policy Planning Committee and is finalised after discussion.



4. The White paper as finalised, is circulated to sample institutions and certain experts for their comments.
5. The white paper is revised in the light of the comments received.
6. Programme Advisory Committee meets and works out the modalities of plan of implementation.
7. Programmes of improvement are identified, budget for those programmes is prepared and provided for.
8. Personnel to be involved are identified and detailed.
9. Actual phasing of programmes is done alongwith time targets.
10. Scheme for monitoring and programme evaluation is developed.
11. Procedure for summative evaluation is chalked out.
12. Guidelines are prepared for the District Education Committee to launch the programmes.

**STEP—3 : How to accomplish the task ?**

**A. Appraisal of existing position:** This may include:

- a. Preparation of a questionnaire.
- b. Administration of questionnaire on a sample basis.
- c. Analysis of the data.
- d. Identification of strengths and weaknesses of the existing position.

**B. Publicity of the Reform :** This may be done through :

- a. One-day teacher-parent-community meet.
- b. Use of mass media publicising the reform.

**C. Development of teaching-testing material :** It may relate to :

- a. Preparation of the learning units.
- b. Development of unit tests.
- c. Preparation of term tests and final tests.
- d. Developing of diagnostic tests and/or remedial material.

**D. Orientation of Personnel :** This may be done through :

- a. Three-day orientation meet of the District Education Officers, Block Education Officers and Junior Teacher Educators.
- b. Three-day orientation of heads of the institutions.
- c. One-week training of teachers for development of teaching learning material.
- d. One-week training of teachers for development of evaluation material.

e. Three-day orientation of teachers in using diagnostic tests and remedial exercises.

f. Three-day orientation of teachers in analysing and using of test results.

*E. Introducing reforms in Schools :*

In accordance with the recommendation of the Programme Advisory Committee the new programme may be launched:

a. In all the schools of the district with extensive measures.

b. On sample basis in a few schools in a district using intensive measures.

c. By introducing a few types of reforms in all the schools and all the reforms in a few schools.

*F. Supervision of the reforms :* This can be taken up by :

a. Motivation of teachers to undertake the new teaching-testing procedure by Inspecting officers.

b. On-the-spot discussion with the teachers for providing feedback and guidance.

c. Pooling reactions of students regarding reforms introduced.

d. Quarterly/termwise meetings of the supervisors to exchange experience for solving the problems they faced.

*G. Continuous Assessment :* This can be ensured by :

a. Using pre-tests before instruction.

b. Using unit tests after instruction.

c. Using teachers' observation for non-scholastic traits.

d. Maintaining of records of students regularly.

e. Forming judgements in terms of performance objectives.

f. Taking decisions in terms of individual students.

*H. Coordination of Reforms :* This can be done through :

a. Organisation of quarterly meets of the DEOs by the Chairman Programme Advisory Committee.

b. Monthly organisation of meets of the Block Education Officers by the District Education Officers.

c. Organisation of monthly meets of the teacher by the respective Block Education Officer.

d. Development and use of common tests for comparison of students' performance in various schools.



STEP—4 : *How to review the work ?* This can be possible by getting:

- a. Reaction of students through reaction sheet.
- b. Opinion of teachers through questionnaire at quarterly meetings.
- c. Opinions of parents & the community.  
Opinions of Block Education Officers.
- d. Opinions of District Education Officers.
- e. Modified the programme in accordance with the evidence from (a — d)

STEP—5 : *How to evaluate the programme ?*

This may involve evaluation of pupils, teaching learning material, strategy adopted, the personnel trained and accountability aspect.

A. *Pupil Evaluation* : It may be done in terms of :

- a. Scholastic achievement.
- b. Achievement in non-scholastic areas.

B. *Teaching-Learning material* : It may be done in terms of :

- a. Quality of learning units..
- b. Quality of instruction.
- c. Quality of evaluation material.

C. *Strategy adopted* : It may be done in terms of :

- a. Appropriateness of the strategy used.
- b. Efficiency of supervisory services.
- c. Effectiveness of formative evaluation.

D. *Personnel trained* : It may be done in terms of their :

- a. Professional growth.
- b. Proficiency in skills.
- c. Attitudinal changes.

E. *Accountability Aspect* : It may be ascertained in terms of :

- a. Optimum utilization of resources and personnel.
- b. Total time spent on change.
- c. Amount of money spent.
- d. Impact of Change produced.

STEP—6 : *How to follow up ?*

Follow up may be necessary in both the cases whether the reform is introduced in a peace-meal manner or as a blanket reform. In either case follow-up is necessary to perpetuate the good practices and speed up the reform. This may include:

- a. Development of conceptual and illustrative material for feeding to the schools e.g. item bank, observation schedules, unit plans of teaching, yearly plans etc.
- b. Revision of teaching-testing material used in schools.
- c. Conduct of refresher courses for teachers and Block Education Officers for improvement of instruction and supervisory practices.
- d. Revision of record-booklets.
- e. Development of new literature like the handbooks on evaluation for use of teachers and supervisor.

*Basic Principles*

The various suggestions given above may be taken as only, guidelines and are not mandatory in nature. Since every state differs in its resources and their specific needs and technical know-how besides their curricula, it is for each state to develop their own plan of action keeping in view its assets and liabilities. Whatever scheme or plan of action is developed, the following principles may be kept in mind which in all probability would work with all types of innovations. :

- a. Need assessment is basic to every improvement and reform to be undertaken.
- b. It is easier to implement a plan of reform if it commensurates with its financial and manpower resources.
- c. The resistance to any change in the existing system is minimised if those who are going to be effected by the change, are involved in its planning.
- d. A plan of action will succeed if teachers involved in it are properly motivated and given adequate training before implementation.
- e. Inbuilt evaluation is a necessity to keep the innovators informed throughout the process of reform.
- f. If supervisory services are strengthened both technically and administratively, it hastens the speed of reform.
- g. Watch against the negative collateral effects of the reform introduced.



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